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A Cabinet For Every Need

Rackmount Solutions Is In The Business Of Cabinet Innovation

WOULD YOU BELIEVE that there is a company that offers uniquely customized solutions as well as off-the-shelf products without trying to sell you the highest-priced model? This is the philosophy behind Rackmount Solution's success story as a server storage manufacturer and distributor. The company takes customer service seriously and meets individual clients' needs by listening and responding to specific requests.

The company's founder takes personal pride in her products. "Rackmount Solutions started in a spare bedroom in 2001. I had a background in black metal and 20 years of entrepreneurial

Air Conditioned Server Cabinet

Configurable in more than 112 sizes, the AC cabinet features three sets of L-shaped universal mounting rails, an MTemp10000 Temperature Display, and a smoked Lexan lockable front door.

Starts at $4,553

experience," says Deborah Petty, founder and president of Rackmount Solutions (www.rackmountsolutions.net). "I worked out of the bedroom for a year and knew it needed to expand when customers asked to come by and look at the product before buying. We opened a brick-and-morter store and a warehouse and added personnel and space as we were driven by our customer base and sales."

Rackmount's Plano, Texas, store serves its local clients, but Petty wanted to go global. B2B stores on the Internet were still struggling for perceived legitimacy in 2001. Rackmount Solutions wanted the business community to know they could buy with confidence, that it was committed to the long-term satisfaction of its customers. "We made the commitment to quality publically by obtaining an ISO 9001:2000 QMS certification," Petty says. "That, along with our GSA schedules, answered any doubts any customer had. The extraordinary examination the government requires before granting schedules is very thorough. Since we have three schedules, you know we are financially solid, our customers are happy with our product line, and we surpass industry standards for quality products."

For Niche Markets

Rackmount Solutions offers a huge selection of regular and customized cabinets, but it specializes in niche air-conditioned and soundproof cabinets in particular.

The Air Conditioned Server Cabinet line ranges in size from 2,000 to 20,000 BTUs and features internal or external AC units. The cabinet also includes high-CFM blowers for maximum airflow throughput, a condensation management system to evaporate moisture, and gasket sealing.

If you need a cabinet that's both cool and quiet, consider the company's line of soundproof server racks. According to Petty, these cabinets can "take blade server noise down to the sound of the library." To put that in decibels, several of the soundproof server cabinets reduce sound by 28.5dB(A), up to five times quieter than your standard cabinet. Integrated thermostatic cooling can keep excessive heat from shutting down servers and voiding manufacturers' warranties.

Rackmount Solutions supplies cabinets for an even more specific niche: ships. A small line of cabinets is available for shipboard locations on commercial luxury cruises and military vessels.

In addition, Rackmount Solutions employs a "Lincoln Log mentality" with its products, meaning it can accommodate almost any data center configuration and layout because its cabinets come in any combination of eight different heights, four widths, and four depths; multiple door and fan configurations; and more accessories than can be counted.

Development Over Commission

Rackmount Solutions offers good, better, and best solutions to meet a variety of needs. "For the customer who is under serious budget constraints or doesn't need anything complicated, we have good products," Petty says. "For those who need more versatile features, strength, and flexibility to expand, we have entire lines that are the best in the business."

Another priority for Rackmount Solutions in its continual commitment to constructing high-quality cabinets that are ahead of the curve is its one-on-one service, offered without putting pressure on any purchaser. "Everyone is used to

UCoustic 9210 Soundproof Rackmount Cabinets

The Soundproof Cabinet series is designed for quiet operation in a noise-sensitive environment. It can reduce sound levels to five times less than what's produced by standard rackmount equipment.

Starts at $3,657

salespeople upselling because they're going to make a quota or big bonus," Petty says. "It can be hard to tell if you're getting honest advice. We don't do that here."

Petty explains that from day one, Rackmount Solutions' salespeople have been salaried, so worrying that you're getting the best value for your project is a non-issue. Staff is here to educate and help each client with whatever question or project they are looking to resolve. Petty's commitment to innovation and excellence is evident in the level of responsibility she claims for each and every product Rackmount Solutions produces. "When you're the founder of a company and you know many of your clients by their first name, there's real accountability in meeting their expectations," she says. ▪

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News

iPad Favored By Consumers

According to a survey conducted by analyst firm Robert W. Baird, consumers far prefer the iPad over any other tablet. According to the report, more than half of the 1,114 respondents said they either own a tablet or are interested in purchasing one. Of these respondents, 95% would choose Apple's iPad. Respondents were allowed to choose multiple devices; however, the next most-chosen device was the HP TouchPad, claiming only 10% of the vote. The firm says few competitors pose any threat to Apple's tablet market share. Other tablets, including RIM's PlayBook, Motorola's Xoom, and HTC's Flyer, were chosen by fewer than 10% of participants.

Android Now The Most-Attacked OS

The threat landscape was described as chaotic and changing in McAfee Labs' recently released threat report for the second quarter of 2011. The company saw more instances of hacking, which resulted in compromised networks and servers as well as stolen usernames and passwords. For-profit mobile malware also increased, such as SMS Trojans targeting smartphones. Android, by far, was the most-attacked OS, targeted by about 60% of the mobile malware monitored by the security company. The second most-attacked OS was Java ME; still, Android attacks totaled more than three times the number of Java attacks. The report suggests users evaluate their behavior when using such devices.

Verizon Buys CloudSwitch

Verizon recently purchased software company CloudSwitch, which, according to Verizon, will be combined with its Terremark IT services subsidiary (purchased earlier this year for $1.4 billion) to boost its own cloud offerings. CloudSwitch software has been available for

about a year and has already been sold to 15 large companies—most of which are in the medical field. Current CloudSwitch clients include Novartis and Biogen Idec. The software helps move workloads to both on-premises and cloud infrastructure using a single application and also helps migrate legacy applications to the cloud. Details of the acquisition have not been released.

IDC Report: IBM Tops Server Market

Global server revenue increased 17.9% year over year in the second quarter of 2011, according to an IDC report. IBM's revenue increased 24.5%, gaining the lead in the server market with $4 billion in revenue for the quarter. HP dropped to second, with a slight decline in sales from the first quarter of 2011. IBM currently holds 30.5% of the server market, and HP claims 29.8%. IDC anticipated worse statistics for the server market but found strong sales worldwide at $13.2 billion—this is the second-highest total ever reported in a June quarter.

Navy To Cut IT Budget By 25%

Navy CIO Terry Halvorsen announced that the U.S. Navy, including the U.S. Marine Corps, will be cutting IT spending and reallocating IT dollars "to be spent in the wisest way possible." According to Halvorsen, the IT budget for the department will be reduced by 25% over the next five years. Although the war-fighting budget is said to remain intact, the department will alter spending by finding enterprise licensing savings, implementing strict oversight rules, and consolidating Navy data centers and applications. Currently the Navy is planning to implement a thin client strategy, analyzing service plans for mobile phones, and considering commercial cloud computing options for a variety of non-sensitive uses.

MIT Develops Defense Against MITM Attacks

MIT researchers devised a security scheme to defend against man-in-the-middle attacks on wireless networks. MIT's solution, called tamper-evident pairing, or TEP, can create automatic connections between wireless devices without requiring a password or using infrared or video channels. In a MITM attack, the attacker tampers with wireless messages between two connecting devices as they are exchanging encryption keys. The MIT researchers were able to identify the main tampering techniques and develop protocols for detecting and blocking them. The group says TEP can be used to protect any type of wireless connection between devices or between devices and access points or base stations.

Cisco Buys Versly

Cisco announced that it acquired San Francisco-based Versly, which creates software that makes it easier for users to collaborate with Microsoft Office. Terms of the acquisition were not disclosed. Versly's plug-in, which lets users share Office files and communicate about work, will be integrated into Cisco's Quad, Jabber, and WebEx services. Cisco says Versly's employees will become part of Cisco's Collaboration Software Group, which reported an 11% year-over-year increase in revenue during the company's fourth quarter. The Versly acquisition comes only a week after Cisco paid $31 million for the software assets of a Comptel subsidiary in the UK formerly called Axiom Systems.

TDWI Releases Data Analytics Report

A report from The Data Warehousing Institute found that new technologies and decreasing storage costs are giving companies the ability to store, manage, and analyze large and diverse data sets. The report, which is based on responses from 325 IT managers, business users, and consultants, found that about a third of the respondents currently perform some type of analytics on Big Data. This includes predictive analytics, business intelligence, data mining, and statistical analysis. More than 60% of the respondents

said they hope data analytics can improve their company's social media marketing abilities, and about 45% expect Big Data analytics to result in more accurate business intelligence.

Google Tests Fiber Network In Palo Alto

Google launched a beta version of its 1Gbps fiber network in residential neighborhoods in Palo Alto, Calif., near Stanford University. The service, which is free for the first year, has been live for about a month and is still being rolled out to homes around the community. Google announced earlier this year that it will build a larger fiber network in Kansas City, Kan. One Palo Alto user connected to the network reported download speeds of more than 150Mbps and upload speeds of more than 90Mbps. The Google Fiber initiative's goal is to provide homes and businesses with broadband connection speeds 100 times faster than average to help entrepreneurs test new Internet applications and services.

Microsoft Releases Malware Study

Microsoft researchers found that nations with computer security teams and proactive ISPs have consistently lower rates of malware infection. Microsoft's analysis found that Austria, Germany, Finland, and Japan all had consistently lower infection rates than the global average. Microsoft says those rates have stayed consistent since 2007. The team attributes the lower infection rates in these countries to "strong public–private partnerships that enable proactive and response capabilities." These countries also have computer emergency response teams and ISPs that take an active role in monitoring and managing infection threats and an IT culture where admins respond quickly to system infections, Microsoft says.

Google Reaches Settlement Over Illegal Ads

Google agreed to pay $500 million to the federal government to settle charges that it knowingly displayed ads for Canadian pharmacies that were illegally shipping prescription drugs to U.S. customers. The Justice Department said that Google was aware that some Canadian pharmacies advertising on its site did not require a prescription for drugs such as Oxycontin and Ritalin. However, Google still accepted payment from those pharmacies and helped them improve their Web sites, according to the Justice Department. Google found out about the investigation in 2009 and began taking steps to remove ads for illegal pharmacies from its site.

WATCH THE STOCKS

This information provides a quick glimpse of current and historical stock prices and trends for 13 major companies in the technology market.

Company	Symbol	Year Ago	Aug. 18 $	Aug. 31 $	% change from previous issue
AMD	AMD	$5.76	$5.79	$6.83	▲ 17.96%
Apple	AAPL	$250.33	$366.05	$384.83	▲ 5.13%
CA Technologies	CA	$18.57	$18.99	$20.99	▲ 10.53%
Cisco Systems	CSCO	$20.26	$15.01	$15.67	▲ 4.4%
Dell	DELL	$12.12	$13.76	$14.87	▲ 8.07%
Google	GOOG	$460.33	$504.88	$540.96	▲ 7.15%
HP	HPQ	$39.21	$29.51	$26.03	▼ 11.79%
IBM	IBM	$125.77	$163.83	$171.91	▲ 4.93%
Intel	INTC	$18.14	$19.77	$20.13	▲ 1.82%
LinkedIn	LNKD	n/a	$78.83	$84.12	▲ 6.71%
Microsoft	MSFT	$23.90	$24.67	$26.60	▲ 7.82%
Oracle	ORCL	$22.62	$25.19	$28.07	▲ 11.43%
Red Hat Software	RHT	$35.65	$33.33	$39.54	▲ 18.63%
Symantec	SYMC	$14.08	$15.81	$17.15	▲ 8.48%

NOTE: This information is meant for reference only and should not be used as a basis for buy/sell decisions.

Google

STATS & FACTS

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FROM LEADING RESEARCH FIRMS

The Consumerization Of IT Continues

Is your company embracing employees bringing in their personal devices for use at work? Are you resisting the change? Or are you somewhere in between? If you still need proof the wave is coming, here's a look at how the smartphone and tablet markets are shaping up this year.

Smartphones: No Signs Of Slowing Down

Sales of smartphones are up 74% year over year during the second quarter and now account for 25% of all mobile devices sold, according to research firm Gartner.

"Smartphone sales continued to rise at the expense of feature phones," says Roberta Cozza, principal research analyst at Gartner.

Worldwide Mobile Device Market Share

Nokia	22.8%
Samsung	16.3%
LG	5.7%
Apple	4.6%
ZTE	3%
Research In Motion	3%

By Operating System

Android	43.4%
Symbian	22.1%
iOS	18.2%
Research In Motion	11.7%
Bada	1.9%
Microsoft	1.6%

Internet-Enabled Devices To Outship PCs

Businesses and consumers have been slowly replacing their PCs with notebooks and other form factors for quite some time, but new research from IHS iSuppli shows just how far the PC has gone. By 2013, iSuppli says, Internet-enabled devices will outship PCs.

- Between 2010 and 2013, shipments of Internet-enabled devices will grow from 161 million units to 503.6 million units.

- During the same timeframe, PC shipments will increase from 345.4 million units to 433.7 million.

- iSuppli predicts that tablets will lead the shift.

❚ IHS iSuppli: RAM Prices Set To Fall

Prices for DDR3 memory will drop significantly in the third quarter because of the slow PC market, according to analyst firm IHS iSuppli. DDR3 RAM with a 2Gb density will have an average selling price of $1.60 during the third quarter, down from $2.10 during the second quarter. Prices could fall to $1.25 in the fourth quarter. According to IHS iSuppli, the same memory cost about $4.70 during the third quarter last year. The recession and increased demand for tablets have hurt the PC market, and PC manufacturers are focusing on low-end PCs that don't require as much RAM, IHS iSuppli says.

❚ Half Of All U.S. Adults Use Social Networking Sites

According to the Pew Research Center, 50% of all U.S. adults are now using a social networking site. Just six years ago in a similar Pew survey, only 5% of adults in the United States were using a social networking site. Although Internet users age 30 and under have been the largest demographic using social sites (61%), baby boomers (ages 50-64) are increasingly adopting the new form of networking—currently 32% of this group use social networking sites. Older users are less likely to use the network on a daily basis, unlike younger users, but most all respondents used positive words to describe their social networking experience.

❚ iPad On Top At Least Until 2013

Apple's control of the tablet market should continue through 2013, according to IHS iSuppli. Previous estimates of 43.7 million iPads sold for 2011 have been revised to 44.2 million. With a total of nearly 60 million tablet sales predicted for all manufacturers this year, it is predicted the iPad will account for about 75% of the total. iSuppli sees results nearly as promising down the road, estimating that Apple will command unit sales of 120 million into 2015, a 44% share. Behind this strong showing is substantial educational and business sector interest, as well as steady successes in Asian markets, particularly China.

❚ Read In As New CEO At AMD

AMD has a new CEO to take over for Dirk Meyer, who resigned in January after disagreements over company strategy. Rory Read, formerly president and COO of Lenovo, will take over immediately. AMD is hoping Read's experience will serve it well as it aims to grow in the server and mobile arena. The company is also looking for a spark of life to aid it in the tablet market, an area where it is virtually absent. Read was one of many executives considered for the CEO position at AMD, among them William Nuti of NCR and former HP CEO Mark Hurd.

❚ Apple Seeks To Keep Cook Through 2021

Apple's board of directors offered Tim Cook, newly hired to replace Steve Jobs as the company's CEO, 1 million shares of "restricted" stock if he is still with the company in August 2021. But it would not all be granted at once. Half would be his if he is still employed there in August 2015, and he would receive the other half in 2021. Those shares have a current market value of about $384 million. The stock award will eventually give Cook a stake in Apple about one-fifth that of Steve Jobs, who holds 5.5 million shares worth about $2 billion.

❚ Injunction Stands On Samsung Tablet Imports

A German court upheld a preliminary injunction that prohibits Samsung from selling its Galaxy Tab 10.1 tablet PC in Germany. Apple requested the injunction, claiming that the Galaxy Tab was too similar in design to the iPad 2. The court had originally banned the import of the Samsung device for the entire European Union but in the end limited it to Germany. Samsung claimed that Apple had deliberately doctored photos of the Galaxy Tab to make it look like the iPad 2. The court said it will make a final ruling on the case on Sept. 9.

❚ Mobile Broadband Expansion Will Feed Job Growth, Experts Say

The U.S. employment rate would receive a boost with the expansion of broadband services, according to economic development and business officials in a conference call sponsored by the Internet Innovation Alliance. IIA members said that the merger between AT&T and T-Mobile could create 100,000 jobs and that FCC efforts to expand rural broadband services will also create jobs. The conference call followed a Deloitte study that says the United States needs to do more to use available spectrum and to release new spectrum to avoid falling behind in the international race for 4G implementation. Sufficient investment could create between 300,000 and 700,000 jobs, the study says.

❚ Server Market Sees Second Quarter Growth

Worldwide server sales increased 8% year over year during the second quarter, according to Gartner. The average selling price for servers also increased, resulting in a 19.5% jump in total server revenue for the quarter. Blade server shipments were up 8.2% for the quarter, and revenue increased almost 30%. HP posted about $4 billion in server revenue for the quarter, an increase of 11.4%. HP accounts for 29.8% of the market based on revenue, down 2.2% from the same quarter last year, Gartner says. IBM reported server revenue of $3.8 billion, an increase of 23.9% year over year.

❚ U.S. Nearly Takes Mobile Data Lead

The United States stands at No. 2 in the consumption of mobile data, according to the second-quarter international report of mobile data from Chetan Sharma Consulting. Estimates show 675MB of data per month by the average U.S. mobile data user by year's end, second only to Sweden, at 760MB. In SMS, the United States is on top with 664 messages per user, per month, ahead of the former leader, the Philippines, at 560. Mobile data revenue for the United States is up 5% from the previous quarter and 22% from last year. By 2013, Sharma predicts, data will generate more revenue than voice.

Value For Enterprises In Mobile Cloud Apps

Model Metrics released a report detailing its cloud computing priorities for enterprises. According to the company, there is significant value in mobile cloud applications—Model Metrics' mobile projects have already nearly tripled in 2011. More than 80% of Model Metrics' customers have smartphone and tablet adoption plans underway, and the company says enterprises are experiencing business return on mobile strategies. Other top priorities in the report include engaging in social technologies, transitioning business processes to the cloud, designing cloud apps that drive adoption, and deploying globally while customizing locally.

Judge May Delay Oracle-Google Trial

A judge for the Northern District of California ruled that Oracle's lawsuit against Google over alleged violations of Java copyrights and patents in the Android mobile OS might need to be delayed. According to the judge, another "large criminal trial" he is overseeing may affect when the Android case would be heard. If the other trial does not begin as scheduled on Oct. 17, jury selection for the Google-Oracle case will take place Oct. 19, with the trial beginning on Oct. 31. Oracle sued Google in 2010, saying that Android violated patents Oracle holds on Java. Google denies any wrongdoing.

Cisco Acquires Axioss

Cisco announced that it will pay $31 million in cash for the software assets of Axioss Systems. Axioss, which Comptel acquired in 2008, is based in the United Kingdom. Cisco says the Axioss software, which automates ordering, inventory, and new customer activation processes, will give network operators the ability to speed up deployment of data, video, mobility, and cloud services to customers. When the acquisition is complete, Axioss employees will become part of Cisco's Network Management Technology Group under the Advanced Services Group. The acquisition is expected to close in the third quarter.

Visentin Takes Over Enterprise Services Business

There's been an administration shift in HP's Enterprise Services business. Tom Iannotti, who had earlier expressed his plans to retire, will be replaced by John Visentin. Visentin's official title will be executive vice president of HP Enterprise Services. He will also assume HP Executive Council duties. Visentin will report directly to HP President and CEO Leo Apotheker. HP Enterprise Services this quarter made up 29% of HP's overall revenue, increasing 4% year over year. HP also announced it will be shedding its webOS device business; exploring the possibility of selling its PC business or creating a spin-off; and purchasing Autonomy, a cloud data management services provider.

Text Messaging & Taking Pictures Most Popular Smartphone Apps

The Pew Internet and American Life Project completed a survey asking smartphone users which apps they use, and the results show equal numbers of owners, 92%, use text messaging and picture-taking apps. These popular applications were followed in order by accessing the Web (84%), sending pictures and videos (80%), and sending or receiving email (76%). Three other apps rated over 50% include frequenting social networking sites, watching videos, and playing games. Most surprisingly, Twitter, despite its popularity, was used by only 15% of the smartphone owners.

Tablet Sales To Beat PCs By 2013

The once-mighty PC is losing its grip on Internet users, courtesy of Internet-enabled devices. According to market research firm iSuppli, there will be more iPads and even game consoles shipped in 2013 than PCs. Internet devices will see shipments of 503.6 million units in two years. That figure will have risen from 161 million units in 2010. By contrast, PC shipments are only expected to grow from 345.4 million to 433.7 million during the same period. The firm expects Internet device shipments to rise to more than 750 million units by 2015, compared to just 479.1 million PCs expected to ship.

Spam Reaches Two-Year High

M86 Security Labs, a company that monitors spam traffic across many domains, discovered that spam levels, especially those with a malicious intent, have reached a two-year high. The new figures include a particularly vicious spate at the end of last year before the SpamIt group was shut down. According to M86, most of the spam is connected to the Cutwail botnet. Recent figures for the malicious emails have ranged from 13 to 24% of the total spam sent, with some sources saying more spikes are imminent. M86 says the most prevalent subjects of the damaging spam messages were dating, gambling, and pharmaceuticals.

PHOTO LISTINGS

The *Processor* Photo Listings section includes brief overviews of data center products. All products listed have been released recently, so use this section to get up to date with what's new on the market and to find products you need.

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- Certification reduces downtime by 20%
- Certified teams are 28% more productive
- 75% of managers believe that certifications are important to team performance

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Global DataGuard announced the availability of the enhanced Signature Selection Capability for customized detection of network vulnerabilities. Configurable through the unified management console's tools menu, the new Signature Selection feature automatically fine tunes signatures based on a customer's specific network requirements. The signature selection software automatically matches existing Common Vulnerabilities and Exposures-based (CVE) signature rule sets to vulnerabilities and then loads IDS/IPS detection rules that specifically look for network attacks and potentially vulnerable resources. The Signature Selection feature can exclude any given signature rule set, as needed, if it relates to activity that a customer's application requires in order to function.

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The Accordance ARAID creates RAID1 storage using the existing hard drive allowing computers to run with duplicate data. An ARAID-equipped computer never fails due to a hard drive crash. All system, application and data files are continually backed up with the ARAID. Drives are mounted in hot-swappable trays. When a drive fails, replace it and the ARAID automatically copies from the surviving drive. The ARAID 3500 supports 3.5" SATA hard drives and the ARAID M300 supports 2.5" drives. Both mount in 5-1/4" drive bays and require no additional software to install or operate. The ARAID is available for $395.

(866) 334-4446 | www.accordancesystems.com

Employment Escalation

IT Hiring Sees Brighter Days As The Economy Begins To Stabilize

Key Points

- Recent months have seen a significant increase in IT/data center hiring as companies continue to lend more confidence to the economy.

- Projects shelved during the darkest days of the recession are now being dusted off, in turn requiring companies to increase their IT staffs.

- The hiring uptick is expected to continue into the near future, particularly as the cloud, virtualization, and other technologies ramp up demand in growing areas.

AS THE DARK CLOUDS hovering over the nation's economy continue to slowly dissipate, signs of hiring life are quickly materializing in the IT and data center markets. Experts agree the IT job market is now stronger than it's been in years and should continue along that positive path in the near future as businesses move previously shelved projects to the forefront.

"We have experienced signs that hiring has improved over the past six months in the data center/IT job market," says Robert Byron, principal and supervisor for the information technology group at Winter, Wyman. "Those signs include a significant increase in the number of jobs we are working on, a greater sense of urgency from our clients to interview candidates, and a much more aggressive hiring cycle and timeline from those clients."

During the more difficult time of the recession, Winter, Wyman found that its

twofold—the Northeast is dense with many different types of industries, ranging from financial services to universities, manufacturers, and bio tech, to name a few, and many of our clients had to delay key projects because of the initial downturn. The need for these upgrades intensified over the downtime and created pent-up demand," Stillman says.

The recent rise in IT hiring doesn't appear to be a minor blip on the overall employment radar, as its effects are trickling down across several areas. For example, Lance Reese, president of Silver Peak Consulting, notes that companies now find themselves needing to increase salaries to attract recruits, and even new college graduates are demanding higher starting salaries while entertaining multiple simultaneous offers. These changes are partly due to the behaviors of businesses during the recession.

themselves are also reaping the benefits of increased confidence in the market, which should translate to continuing improvement in the job market.

"IT staff tend to get a little antsy after a few years of doing the same thing and stick their heads up to see what other people in the industry are doing," Reese says. "The economy and inability to relocate—due to the housing crisis—have limited their options for changing jobs for three years now, but with the recent investments, the increased demand will inspire people to leave their current companies, creating openings for others."

The continuing upswing will also be bolstered by needs in particular areas. For instance, Stillman points to areas such as Web development requiring a drastic influx of new candidates to meet current demand, while Byron says there is a shortage of .NET developers, business

> The recovering economy is now injecting confidence into the business realm and enabling companies to increase their data center and IT staff to meet the demands of business users.

clients were forced to run very lean data centers and IT departments with enough resources only to perform routine maintenance. However, the recovering economy is now injecting confidence into the business realm and enabling companies to increase their data center and IT staff to meet the demands of business users.

No More Delays

According to Adam Stillman, technical recruiter/team lead at Eliassen Group, the economic downturn hit the northeast United States in the fourth quarter of 2009 (about one or two quarters later than the rest of the country) and continued in that direction until about July 2010. Since then, Eliassen has seen steady growth in IT hiring.

"Not only did we begin to see signs of the downturn later, we also begin to see the upward climb earlier. In my opinion, the reasons for this turnaround are

"For the last three years, most companies have simply been banking cash while waiting out the recession," Reese explains. "As a result, most noncritical IT projects—even strategic ones—were shelved awaiting the competition to move first. . . . In the last few months, these cash-rich companies have started to reinvest in those tabled IT projects or new ideas that have been innovated but not capitalized, which in turn has created a demand for IT personnel to fulfill them. It has snowballed, albeit on a small scale, and companies are beginning to react to the IT investments of their competitors."

Looking Ahead

The IT/data center job market might be bright today, but will this uptick continue? Very likely, Byron says, adding that as confidence continues to increase with more companies, they will find a need to expand their staffs. IT candidates

system analysts, and systems engineers and programmers. Meanwhile, Sarajane Mackenzie, vice president of human resources for Tata Consultancy Services North America, says that the added complexity resulting from social networking, along with the advent of the cloud, has boosted the need for skill sets around ERP (enterprise resource planning) and BI (business intelligence). However, there's yet another element that should help the IT job market continue on its positive path.

"Demand is outpacing the number of qualified IT professionals in the U.S.," Mackenzie says. "There are not nearly enough Americans graduating with degrees in IT/computer science to meet business needs. Today, less students are enrolling into technology-related degrees than ever before, at a time when knowledge workers are most in demand. Unless we see a greater proactive effort to get Americans—students in particular—

interested in technology, this skills gap is unlikely to be rectified in the near term."

On The Down Slope

Although some areas in the IT job market are ripe for expansion, others have the potential to see decreased interest in the coming months and years. For example, Reese says that network and systems engineering jobs will continue to deteriorate as adoption of data center virtualization and cloud services increases. Along the same lines, Byron adds that advances in the cloud, virtualization, and automation will contribute to a decrease in systems administrators.

Reese also predicts that while job demand for higher-end hardware engineers and architects will remain steady, lower-end positions will diminish as CIOs expect their engineers to manage many more systems per head count than ever before. ▯

Hot Jobs

The IT and data center job market is currently enjoying a resurgence, but as always, some jobs are in greater demand than others. Here's a glance at what industry insiders see as the current hot jobs.

- IT security professionals
- Java/Web developers
- Virtualization experts
- .NET developers
- Business systems analysts (especially with financial services experience)
- Systems administrators/engineers with SaaS (software as a service) and cloud computing experience
- ERP (enterprise resource planning) and BI (business intelligence) experts
- Systems integrators

Unix Data Center Managers Skeptical Of Public Cloud, Open To Private Cloud

Gabriel Consulting Group conducted a survey of 306 data center managers utilizing Unix systems to uncover their views on cloud computing. The survey revealed that Unix users are much more likely to use private cloud solutions vs. public cloud solutions for their data centers. The GCG Unix Vendor Preference Survey revealed that fewer than one-third of survey respondents are currently using public clouds, with cost, availability, and quality of service as the main inhibitors.

"Unix systems these days run highly important workloads—mission-critical workloads for the most part," says Dan Olds, principal analyst at Gabriel Consulting Group. "Because of the importance of these workloads, data center managers are reluctant to risk any sort of disruption or lower availability or, worse yet, security breach."

According to survey results, 50% of respondents are in the process of building a private cloud, which would be protected

by their own firewall. The other half of respondents are either not in the stages of developing a private cloud or are unsure of their enterprise's plans. Olds says this trend of building up the private cloud will likely continue in the coming years.

Motivation To Implement Cloud Solutions Varies

When asked if their main interest in cloud computing is to increase IT flexibility and speed, 50% of respondents agreed, commenting that such an infrastructure would help application implementation. Nearly 30% disagree

that the cloud would increase flexibility and speed, and 23% say they are unsure.

Surprisingly, less than half of these Unix users said their interest in cloud solutions revolves around cost advantages. Although 44% list cost as a main reason, 34% would not consider cost efficiency their main interest in moving to the cloud. According to respondents, there is question whether a public cloud would save money after meeting SLA requirements and whether a private cloud would result in savings if more management issues were

involved. Olds agrees, saying there is currently no proof that cloud solutions will save money vs. traditional IT.

"There is definitely too much hype surrounding cloud computing these days. However, that said, private clouds will definitely have a big impact on modern data centers," Olds says. "Public clouds are useful and will also grow over time, but I don't see them taking the place of private in-house IT. Public clouds require too many trade-offs in terms of control, security, availability, and reliability to become the be-all, end-all information technology solution."

BUYING GUIDE

BUYING TIPS:

Fire Protection

YOU PROBABLY ALREADY HAVE a lot on your plate if you're in charge of protecting the data center. Hackers, hardware and software failures, and changes to the physical infrastructure are all concerns. Fire protection is one issue that probably isn't on top of your list, but if your data center isn't capable of suppressing fires, all the rest of your hard work may be for naught. Here, we'll examine what key features you should look for when investing in data center fire protection.

Alert options. You'll need to invest in a smoke and fire detection system that can alert employees and IT staff to problems. Some models are capable of detecting the various stages of a fire, such as visible smoke vs. flaming fire vs. intense heat, to allow you to set off alarms or activate various stages of fire protection.

Regardless of which type of suppressant is selected, you'll need to know at what stage during a fire the detection system should trigger the suppressant to release. According to Steve Joseph, director of marketing development for Xtralis (www.xtralis.com), "Unnecessary or poorly timed suppression dumps must be avoided since the cost of such mistakes is enormous, because a volume of clean agent sufficient for even a modestly sized area can cost tens of thousands of dollars to replace." In short, effective detection is key, as the suppression system is only as good as the detection system initiating the release.

Suppression options. Fire protection is generally broken down into water and non-water options. The obvious downside to using a sprinkler system is that electronic devices and water can be a bad combination, especially in situations that are started by electrical fires. Thus, most data centers opt to go with a clean agent suppression system, which is designed to leave no residue and is safe for both electronics and people, unlike some chemical-based fire protection. "Some clean agent suppressants are complex chemical compounds which act on the fire in various ways, such as reducing the heat, while others are pure inert gases which displace the oxygen to inhibit combustion," Joseph says.

Emergency power off. Nearly all data centers also install an EPO (emergency power off) system, which will shut off any electricity to the area where the detector senses a fire. Look for models with industrial-grade contactors, heavy-duty relays, and hard-piped wiring to prevent any accidental shut-offs. The EPO will need to be able to automatically work with your fire detection system. P

Buyers' Checklist

☑ Find a smoke/fire detection system that meets the needs of your data center, in terms of stages of fire protection and number of physical detection locations.

☑ Research the various clean agent suppression options and make sure your sprinkler system is capable of working with the clean agent suppression system.

☑ Invest in an emergency power off system to shut off electricity when a fire is detected.

Key Terms

Agent storage container. The assembly or unit that stores the clean agent fire suppression liquid until it needs to be released when prompted by the suppression control panel.

Class C. Fire breakouts that involve electrical equipment where a non-conductive extinguishing agent must be used.

Clean agent. A type of fire suppression system that leaves no traces behind and won't damage electronic equipment.

Deluge. A system where all the sprinklers connected to the water piping system are open. If the deluge valve opens due to a signal from the fire alarm system, the entire area will be sprayed with water.

Early warning smoke detector. A passive detector that uses ionization and photoelectric sensors.

Heat detector. A unit that sends a response when the convection of thermal energy changes the temperature of the device's heat-sensitive element.

Suppression control panel. The unit that houses the interface you use to control the fire protection system, including managing the smoke and fire detection systems and report alerts or sound alarms.

Very early warning smoke detector. A type of smoke detector that actively samples air particles via aspiration to find non-visible smoke.

PRODUCT SPOTLIGHT

Fire Protection

Product

Brady Photoluminescent Signs

Description

Brady offers a full line of electricity-free photoluminescent signs to help meet your egress needs. Photoluminescent signs are ideal for green buildings and can help builders earn points toward a variety of LEED credits. Brady's photoluminescent signs are a perfect option for areas with possible electrical power failure. Available in a variety of materials and sizes, Brady photoluminescent signs are 100% reliable and help facilitate safe evacuation during fires, power outages, and emergency situations.

- Non-electrical signs that are visible without power
- Mark doors and paths for safe evacuation during emergencies
- Signs are durable and easy to install

Best For: Companies that need reliable lighted signs, especially in darker areas or places prone to power outage.

Brady Fire Signs

Brady fire signs help you quickly identify fire exits, fire extinguishers, and other fire suppression equipment in your facility. Additionally, Brady fire signs can be used as a guide for proper emergency escapes. With exit and glow-in-the-dark fire signs, you can clearly indicate flammable materials and mark your entire facility for emergency safety. Brady fire signs are available in a variety of sizes, materials, and messages.

- Mark emergency paths and fire exits
- Label flammable materials or fire extinguishers and alarms
- Glow-in-the-dark signs are easy to see during power outages

Best For: Any business that needs clearly marked paths and fire exits in case of an emergency.

Fike SigniFire IP Video Flame & Smoke Detection Camera

The SigniFire IP represents a family of turnkey flame, smoke, and intrusion detection camera solutions that visually detect the presence of fire or smoke at its source, independent of airflow in the area. This technology offers a critical advantage for early warning fire detection, identifying and reacting to fire, and protecting lives and property.

- Detects flame in seconds
- Supplies vital, situational, live video to remote locations
- Provides video surveillance capabilities
- Communicates with fire alarm systems
- Provides prerecorded video forensic evidence for future fire investigations

Best For: Enterprises looking to identify smoke in large spaces and have video evidence for insurance purposes.

Product

Firelock Modular Server Vaulting

Description

With Firelock's Modular Server Vaulting, you get a custom-designed vault that's built to suit your needs. A Firelock modular vault is an enclosure with integrated environmental monitors and fire suppression components, which makes it easier to protect the contents from a fire on the outside. The vaults protect your valuable components from fire while you monitor the servers and equipment from a remote location.

- Class 125 four-hour rated vault door
- Smoke- and heat-activated hydraulic door closer
- Environmental/alarm monitoring
- CCTV surveillance
- Novec 1230 fire suppression
- Watershield roof deck
- Fire-rated electrical cable trays
- Master power switch

Best For: Enterprises that want to ensure mission-critical operations by protecting key equipment in an isolated, secure, and fire-protected area.

Marioff HI-FOG Water Mist Fire Protection System

The HI-FOG system from Marioff discharges a fine water mist at high velocity to suppress and extinguish fire. This setup can be used in place of deluge, gas, foam, dry chemical, traditional sprinkler, and other types of fixed fire protection. HI-FOG uses up to 90% less water than a conventional sprinkler system, which means cleanup is fast and business downtime is kept to a minimum. Fire, water, heat, and smoke damage are minimized, as well, and it stops the fire from spreading or reigniting. A typical HI-FOG system in a data center consists of a high-pressure pump unit, a small water supply tank, section valves, small-diameter stainless steel tubing, and HI-FOG sprayheads.

- Uses a three-prong approach: cooling, radiant heat blocking, and local oxygen inerting
- Offers total facility fire protection to simplify maintenance and deliver cost savings
- Minimizes business disruption because system discharge is localized at only the point of the fire
- Use of various systems configuration points minimizes risk of leakage and false discharges
- Spaces will not need to be evacuated or closed off for HI-FOG to be activated
- Can be easily expanded to new phases of a data center facility
- Supports environmentally sustainable design

Best For: Organizations that want a system that covers all of their fire protection needs.

Periphman Aero-K

Periphman's Aero-K fire suppression system uses potassium-based aerosol generators that can extinguish a fire in seconds. The aerosol won't harm electronics or electronic media such as tapes and disks or the health of facility personnel. Aero-K aerosol generators are compact and easy to install and feature multiple smoke detectors that limit the chance of accidental discharge.

- Available as thermal or electrical units
- Won't corrode steel, plastic, nickel, brass, zinc, copper, aluminum, or other commonly used composites
- Leaves little residue after venting
- Ecologically friendly with no agents that can harm the ozone layer
- Control panel with battery backup in case of power outage

Best For: Information technology and telecommunications industries.

Processor's Product Spotlight highlights options available in key data center product categories, providing product information side-by-side for easy comparison.

Fike ProInert Gas Fire Suppression System

Fike's ProInert system uses inert gas fire suppression technology to put out fires quickly and safely. The ProInert agent is discharged at a steady flow rate, preventing destructive turbulence, and only the necessary amount of extinguishing agent is released. The system also uses environmentally friendly fire suppression agents.

- Replace your existing, and potentially harmful, fire suppression system with an environmentally friendly one
- Reduce installation costs by as much as 60% on hardware with smaller venting areas
- Can be placed in almost any non-critical area
- Directional selector valves decrease the chance of additional infrastructure damage

Best For: Companies that need to replace older fire suppression systems to support a green initiative and save money.

Fike ECARO-25 Clean Agent Suppression System

Fike's ECARO-25 system uses a gaseous clean agent to suppress fires without damaging high-end equipment, electronics, and irreplaceable items with water. It uses an agent called FE25 made by DuPont that absorbs heat energy at the molecular level so a fire can't sustain itself. The system uses Impulse Valve Technology, which efficiently and effectively puts out fire by combining the reliability and efficiency of a rupture disc with the flexibility of electric actuation.

- Puts out fires using a unique, environmentally safe fire-suppressing agent
- Protects expensive infrastructure from fire damage as well as additional water damage
- Use your existing Halon pipe network and update it with the ECARO-25 system

Best For: Enterprises that need an efficient fire protection system that prevents excessive damage to crucial IT components.

Fireaway Stat-X Thermal Units

Stat-X Thermal Units from Fireaway emit an ultra-fine potassium-based aerosol that won't harm sensitive electronic equipment or magnetic media. Thermally operated units integrate a thermal detector that automatically activates the unit in the event of a fire. Thermal units can also be manually activated. Thermally operated units have a low installation cost, are virtually maintenance-free, and have a shelf life of more than 10 years.

- Easy installation that doesn't require pressure vessels, piping, or installation manpower
- Occupies less space than other extinguishing agents
- Environmentally friendly with zero ozone depletion potential
- Favorably reviewed by EPA for SNAP listing

Best For: Electronic cabinets, data processing equipment, and printing equipment.

Polargy PolarPlex Drop Away Panels

One of the big challenges with air management products is maintaining data center fire safety without sacrificing visibility in the aisles. Polargy's PolarPlex Drop Away Panels address those challenges. The panels are the only ones on the market with a UL listing for use under sprinkler heads. With an activation temperature of 135 degrees Fahrenheit, the panels fall to the floor in the event of a fire, so the ceiling-based fire suppression system can operate free of obstructions.

- Custom made to order
- Lightweight and easy to install (a 2- x 4-foot panel weighs only 7 pounds)
- Panel insert material is a special transparent plastic, allowing light to pass through
- Each panel is 0.013 inches thick and slots into an extruded 1-inch anodized aluminum frame

Best For: Data centers that need to seal the top of a hot or cold aisle while still allowing a fire suppression system to work as needed.

Victaulic Vortex

The Victaulic Vortex fire suppression system is the world's first-ever hybrid (water and inert gas) fire extinguishing system that extinguishes fires without the use of any toxic chemicals by deploying a high-velocity, low-pressure mixture of nitrogen and water. The system delivers as little as 1 gallon of water per emitter per minute, and each emitter can protect up to 2,500 cubic feet. The system is compatible with facility fire protection systems to provide greater design flexibility, and it is recharged rapidly, allowing for a return to working conditions almost immediately after a fire.

- Nearly zero wetting of protected areas
- No ozone depleting or greenhouse gas emissions
- Quick system recharge to support minimal facility downtime
- Protects people and assets

Best For: Protection of enclosed cabinets and isolated equipment within protected spaces.

The Slow Transition To IPv6

Most SMEs Aren't Doing Much To Prepare For IPv6, But Experts Say To Start Planning Now

FOR MORE THAN A DECADE, Internet-related organizations have been sounding the warning that the world is running out of IPv4 addresses. In April of this year, those warnings started to come true when the Asia Pacific region officially became the first part of the world to run out of available IPv4 address space; according to the non-profit Internet Society, the rest of the world will likely follow suit before the end of the year. As a result, everyone needs to switch to IPv6. But that transition requires significant planning and preparation.

Although they are aware of the need to switch over to IPv6, "a majority of enterprise customers seem to have little interest in making the transition," says a June 2011 report from Ovum. The market research firm also cited surveys which reveal that less than 3% of all Internet traffic today is IPv6 traffic.

Why aren't enterprise IT managers doing more to get ready for IPv6? What should they be doing? And what are the benefits of getting started now?

Why The Slow Transition?

Experts point to six key reasons why enterprises have been slow to get started with IPv6 adoption:

It doesn't affect me. Because the United States will likely be the last region affected by IPv4 address depletion, many enterprises mistakenly believe they don't need to think about it yet. "The enterprise customers believed that they had such a sufficient number of IPv4 addresses that they just didn't need to worry about it," says Mike Sapien, principal analyst for Ovum's U.S. Enterprise practice. However, Sapien points out that these enterprises are failing to consider the customers and suppliers in other parts of the world that will be trying to communicate with them via IPv6.

It's a low-ROI project. Compared to a lot of other projects, IPv6 seems to require a lot of work for a small payback. As a result, it's stayed on the back burner while projects with better ROI potential get attention.

The industry "cried wolf" on address depletion once before. Sean Duggan, director of product management at F5 Networks (www.f5.com), notes that the industry first began talking about address depletion in the '90s. However, the development of NAT (Network Address Translation) technology postponed the deadline. Because the industry "cried wolf" once before, so to speak, people are less likely to believe the warnings now.

They think they're already on IPv6. The Ovum study discovered that "Some customers also falsely believed that they were actually using IPv6 because their hardware—their routers specifically—supported IPv6," Sapien says. However, having IPv6-ready hardware doesn't mean you're actually using IPv6. He likens it to having a TV that's HD-ready without ever actually ordering HD programming.

They're waiting for vendors and ISPs to make the switch. Some IT managers who do want to switch to IPv6 are saying that their vendors and suppliers can't support it. For example, Justin Ashford, director of technology for the Dallas Museum of Nature and Science, is trying to deploy IPv6 in a new facility that will open in 2013 but is having trouble with some of his smaller vendors. "They're all testing it and planning to support it by 2014, but

> ### Key Points
>
> - Despite all the attention IPv6 has been getting in the press, most small to mid-sized enterprises haven't done a lot, if anything, to get ready for the transition.
>
> - At a minimum, experts say that enterprises should be auditing their applications and infrastructures and making a plan for how they will move to IPv6 when it becomes necessary.
>
> - Companies that start planning and preparing now will likely have a much smoother transition to the new protocol.

they're just not there yet," he says. Duggan confirms, "Still a lot of the ISPs haven't worked out their plans for supporting it."

They're waiting for larger enterprises to go first. According to Richard Jimmerson, director of deployment and operations hub at Internet Society, "When it comes to the adoption of any new technology or standard that's out there on the Internet, what you'll often find is that much larger organizations move first, because they have the resources inside their organization to spend the time to do the research." He adds, "Some of the smaller enterprise organizations, smaller providers out there, they don't have those types of resources, so what they'll often do is they'll wait and allow those larger organizations to go first."

What Should You Be Doing?

Experts say small and medium-sized enterprises really should be doing more to get ready for IPv6. Duggan suggests that they start with an audit of their hardware, applications, and vendors to see what's ready for the new protocol and what isn't.

After that, enterprises should be developing a plan for how they will make the transition. "It's not something that happens immediately, inside of a week," Jimmerson says. "There's actually a lot of planning involved to determine what is going to be best for your company, what methods to use, the timing. You may discover a year down the road that you're too late—this is something you had to do yesterday."

Jimmerson adds that an important part of that plan is determining which services need to be capable of dual-stacking, meaning they can accommodate both IPv4 and IPv6 traffic. He says that Web services and email, for example, will need to be dual-stacked for some time.

Duggan says that certain types of enterprises will need to move forward with deploying IPv6 sooner, such as those with employees or suppliers in the Asia-Pacific region, those who do business with the U.S. government (which began deploying IPv6 five years ago), and those with employees who travel overseas frequently.

Why Should You Start Planning Now?

Like it or not, IPv6 is coming. The experts say that those companies that have planned ahead will likely be the most successful with the transition. "Very soon they will have people, either out of necessity or out of preference, who are going to be trying to reach their Web site or their mail services using IPv6, and you want to plan out in front of that and make sure it's taken care of well in advance," Jimmerson says.

"I liken it to having a disaster recovery plan," Sapien says. "I think that every enterprise should have some planning for it in place so that when the time comes that they need to do it, they have a well-thought-out plan to make the transition."

"The benefit of starting to look at it now is building that expertise," Duggan says. "That way, when it finally comes, if you've already migrated some services and learned all the gotchas . . . you'll be much more confident in doing so vs. waiting until the last minute." P

IPv6 Primer

The old protocol that provided the foundation for the Internet, IPv4, used 32-bit addresses. Although IPv4 provided about 4.3 billion addresses, those addresses are expected to run out by the end of 2011.

In order to deal with that depletion of addresses, the Internet Engineering Task Force approved a new protocol, IPv6, in 1998. IPv6 uses 128-bit addresses and has about 3.4 x 1038 (340 undecillion) addresses available.

Eventually, all of the Internet will transition to IPv6, but for a time, there will essentially be two Internets—IPv4 and IPv6. Enterprises need to make sure their networks can handle traffic running on both protocols.

❚ China Leads In PC Sales

Research firm IDC reported that China surpassed the United States in PC sales and shipments during the second quarter. This is the first time that China has passed the U.S. in those categories, and China now accounts for 22% of the PC market in terms of shipments. PC sales in China reached $11.9 billion, compared to $11.7 billion in the U.S. PC shipments in China increased 14.3% to 18.5 million, but shipments in the U.S. dropped 4.9% to 17.7 million.

Analysts expect the U.S. to sell more PCs than China during the fourth quarter because of increased sales during the holidays, but China will retake the lead in 2012 and beyond. IDC predicts that China will ship more than 85 million PCs next year, compared to 76.6 million in the U.S.

❚ Tech IPOs Surge In Second Quarter
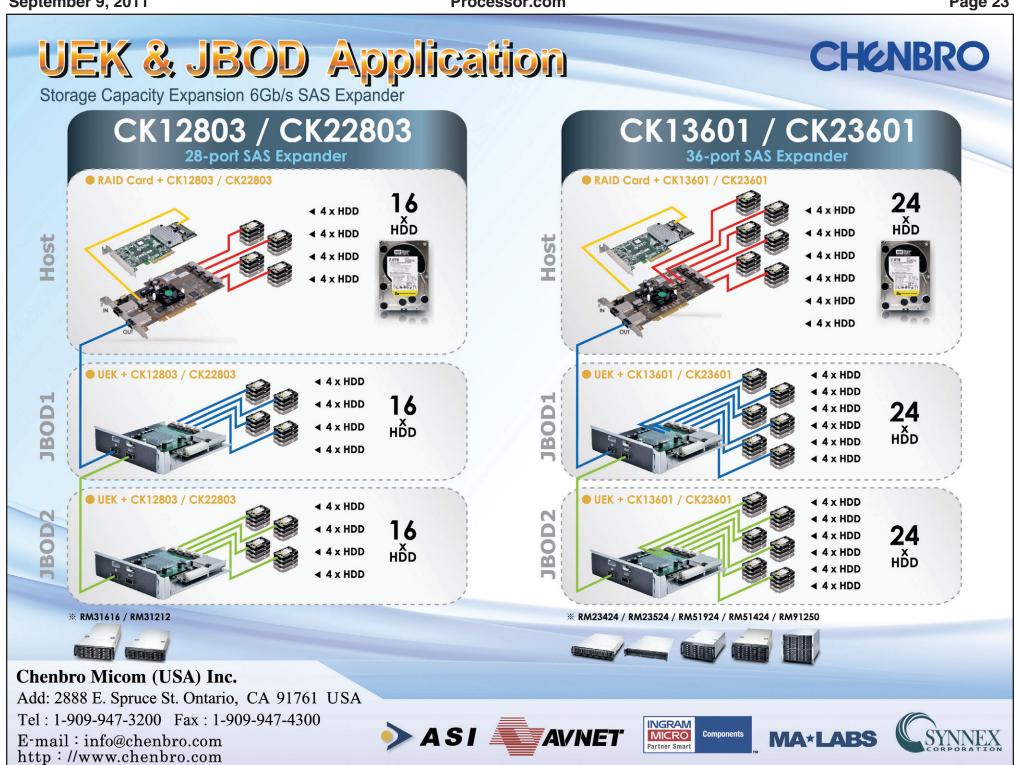
Results are out for second quarter IPOs, and tech stocks made a strong showing. Eleven technology deals were completed this quarter, amounting to 40% of all IPOs that were finalized and resulting in a total value of $4.5 billion. Of those 11, three earned more than $500 million each, according to PricewaterhouseCooper's "U.S. Technology M&A Insights Q2 2011 Update." Pandora, Groupon, and LinkedIn were some of the most notable IPOs, according to the report. PwC listed five main factors that motivated the tech acquisitions: the consumerization of IT, cloud security, virtualization, proliferation of mobile devices, and convergence of technology.
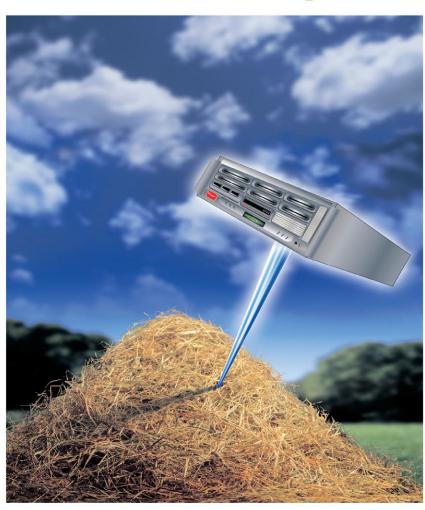
❚ Avaya Gains PBX Market Share Over Cisco

In a report published by Infonetics Research on enterprise unified communication, VoIP, and TDM equipment, Avaya took the lead as the top PBX manufacturer in the second quarter, claiming 25% of the worldwide market, and Cisco remained in the second slot; this is the third consecutive month for their respective positions. Overall PBX revenue internationally was down 2.3% from Q1 2011 but saw a 3.9% improvement over the same quarter last year. The three companies that showed improvement in the second quarter were Mitel, ShoreTel, and Aastra. The Asia Pacific region is the bright spot in the PBX market, realizing a 29% increase year over year.

SIX QUICK TIPS

End-Of-Life Disposal Best Practices

Correctly Managing Asset Life Cycles Protects Your Company In The Long Run

BELIEVE IT OR NOT, for some business owners, end-of-life disposal of sensitive documents involves little more than carrying a box of records to the dumpster and dropping it inside without a second thought. For example, a bystander saw two people digging in a dumpster in Kennewick, Wash., only to discover it contained membership files from a local fitness center—files that included credit card data, Social Security numbers, and driver's license information. In Stockton, Calif., 1,200 medical files from patients at the Sutter Gould Medical Foundation somehow made their way to a landfill. Sadly, news stories recounting similar scenarios are not uncommon in every state, and such incidents can damage a company's reputation and customer relationships, sometimes irreparably.

Conscientious IT asset management and disposal are essential in today's business environment, requiring timely planning for the retirement of hardware and software. We've gathered some tips from some industry experts that will guide you through the end-of-life disposal process, no matter how big or small your company size.

✔ Partner With A Vendor

Safe and secure disposal of data and other assets works best when you utilize a partnership approach. There are plenty of service-oriented vendors available, but choosing one with comprehensive procedures will keep your data out of places it shouldn't be.

According to Michael Saia, CEO of XTechnology Global (www.xtglobal-usa.com), SMEs should select a vendor that offers everything from IT asset e-waste disposition to data compliance services. "When planning IT lifecycle management, SMBs should partner with a quality vendor that can provide high ROIs on end-of-life products for equipment rotation due to refresh, cloud migration, platform change, or just simply IT asset retirement," Saia says. "The best vendors should provide asset tag and serial number tracking

as the IT equipment is slated for remarketing or recycling. Make sure the vendor adheres to safe disposal of recycled material, especially for such items as batteries, UPSes, [and] LCD screens, which require special handling so they are not compromised during transport."

Saia says the full gamut of services, "from the data center to the desktop," should include onsite and offsite asset tracking, removal, packaging, transport, and de-manufacturing.

✔ Protect Against Waste Disbursement

There are hazards associated with improper business equipment recycling, so it's essential to have a vendor that can assist with every step of evaluation, refurbishing, or destruction.

Morris Scott, president of DMD Systems Recovery (www.dmdsystems.com), says that there are plenty of everyday items that contain very hazardous chemicals. "Older CRT monitors contain many heavy metals like cadmium and lead, which can leach into the groundwater if dumped in a landfill. These items need to be broken down by someone who has training and experience," Scott says. "Things to look for in an asset management company or a recycler [include] years in business, certifications, indemnification insurance, [and] timely audits (30 days)."

✔ Adhere To Federal Compliance Laws

Disposing "by the book" isn't really optional because doing otherwise could risk your company's reputation and result in legal liabilities. If you're not already familiar with the data compliance regulations (as they relate to your business or industry), research the following: Sarbanes-Oxley, HIPAA (Health Insurance Portability and Accountability Act), GLBA (Gramm-Leach-Bliley Act), the Data Accountability and Trust Act H.R. 2221, the Personal Data Privacy and Security Act of 2009, and SAS70 (Statement of Auditing Standards).

MOST PRACTICAL TIP:

✔ Ensure Thorough Erasure

"Very few small businesses properly erase data contained on their hard drives. Those who do often use a simple 'single-pass' erasing method, which works great to stop the average person from accessing your information, but for the people who are out there looking for your information, this is merely a small hurdle," says Morris Scott, president of DMD Systems Recovery (www.dmdsystems.com). "There are several software companies that offer disk wiping software that complies with Sarbanes-Oxley, HIPAA, NSA, and NIST. You should choose which method your industry dictates."

Many vendors offer onsite erasure service, which is ideal for keeping track of high volumes of drives that need to be erased. Common methods include physical destruction (disintegration, incineration, pulverization, or melting), firmware security erasure, software overwriting, and magnetic degaussing.

BEST SECURITY TIP:

✔ Use ID Removal Services

To ensure that your brand identity won't be at risk if your hardware is repurposed, consider going with a vendor that offers an identification removal service. By removing ID asset tags, embedded security tags, labeling, embossing, and other branding characteristics, you're adding another layer of end-of-life security that can prevent perpetrators from re-creating your logos or discovering a product's origin.

Saia says proper erasure of data is crucial to meeting government standards. "The vendor should use the latest technology to eradicate data and certify that the data has been erased to the latest NIST (National Institute of Standards and Technology) 800-88 standard," Saia says. "This standard was issued by NIST via the U.S. Department of Commerce's guidelines for media sanitization. Full reporting should be provided and should include part number, serial number, date, time, operator, and type of erasure program used. Drives that don't spin are degaussed, then recycled."

NIST guidelines require accountability from chief officers and program managers, as well. According to NIST's Special Publication 800-88: Computer Security, the CIO is "charged with promulgating information security policy," which entails certifying that sanitization follows NIST procedures. Media sanitation responsibilities trickle down to the property manager (for redistribution), records management officer (for advising others of record retention or destruction), and eventually to the

users themselves, who are obligated to maintain the data confidentiality.

✔ Reuse Or Recycle For A Purpose

There are numerous benefits to recycling, repurposing, and remarketing: You can reduce your carbon footprint, see your measurable impact on a cleaner environment, and prevent the potentially toxic loss of millions of dollars of equipment, just to name a few.

Brandon Kasper, marketing specialist at World Data Products (www.wdpi.com), says that in order to mitigate legal risks, your vendor should offer a recovery and buy-back service to maximize the value of your investment. "IT equipment holds its value, and most equipment resellers will pay top dollar for networking, server, and storage equipment," Kasper says, adding that any recycling services must be environmentally sound and meet all EPA standards.

"Partners that are NAID and R2 certified meet the most rigorous government standards for environmentally sound disposal, so SMBs can rest assured their equipment is not in an unauthorized landfill," Kasper says. ▣

BONUS TIPS

✔ Don't over-wipe.

"Some customers are paying to have seven pass wipes performed when three will do," says Morris S cott, president of DMD Systems Recovery (www.dmdsystems.com). "Some companies are paying to have equipment destroyed when there can be some value in the scrap."

✔ Work with local companies if possible.

If there is a data destruction company in your area, you can keep costs down by transporting equipment for destruction a shorter distance. Building a trusting vendor relationship should be cost-effective in the long run, especially when you need to run mid-lifecycle assessments or prepare retirement-ready products for auction or donation.

Savvy Security Spending

Effective Use Of Your Security Budget Requires Planning & Prioritizing, Not Technology

As companies in all sectors begin to size up their IT budgets for the coming year, security-related spending promises to attract even more attention than usual thanks to the growing trend of high-profile security breaches. And in a tight economy, the answer for budget-weary data center managers isn't to spend more; rather, they need to spend wisely. Here are some tips for stretching your security budget further.

Spend On What Meets Your Specific Needs

Companies that blanket-spend on security in the hope that it'll buy them enough protection are missing the point—and wasting money.

"You need to determine what makes sense for you to spend the kind of dollars that will get you to a fit-for-purpose security," says Julius Azarcon, managing director of technology risk advisory firm Eosensa, who recommends starting with a formalized risk assessment. Such an assessment can help to zero in on precisely what information assets need to be protected and the specific risks associated with each of these assets, coupled with a data flow analysis to determine how data—including client data—flows through existing systems.

"Then you'll know what you need to protect and what controls you'll need to implement," Azarcon says. "A risk assessment will give you that guidance in terms of where you need to focus your efforts and what you need to invest in."

Armed with this knowledge, IT is in a much better position to more precisely focus security spending on the areas that will return the most protective result for the least cost. But a one-size-fits-all approach will fall short.

Best Tip: Save Money With A Proactive Approach

Some of the smartest spending strategies don't involve spending at all. Sadik Al-Abdulla, a senior manager with CDW Security Practice (www.cdw.com), says a proactive approach to security management can pay huge dividends. "Proactive behavior is always the best way to protect and extend your security budget," Al-Abdulla says. Such an approach should include the following:

- Creating and enforcing processes for monitoring network vulnerability.

- Installing the latest patches not only for the operating system, but for other critical apps such as Flash, Acrobat, and antivirus clients, among others.

- Checking newsgroups and security mailing lists to stay on top of rapidly changing threats and solutions.

- Using automated tools to scan all networked PCs for compliance and automatically downloading patches as appropriate.

"There isn't one specific technology," Azarcon says. "Don't put all your eggs in one basket. Instead, invest in defense-in-depth via multiple mechanisms and controls, all based on the organization's understanding of where critical information and data resides. Then go from there."

Use Education To Stay Up-To-Date On Threats

Technology, even if it's spread among many baskets, only goes so far. Even if IT has a fundamental understanding of the data environment, the days of layering on security spending to mitigate vulnerabilities are over. The threat environment evolves far too quickly these days, and IT needs to adapt.

"A lot more breaches are caused by the old-style phishing attacks, only now they tend to be much more sophisticated, with what seem to appear as legitimate emails getting users to disclose information that can lead to a company-wide breach," says Jack Gold, founder and principal analyst at J.Gold Associates, who adds that this new generation of advanced persistent threats, or APTs, are harder to keep at bay because they're based on human nature—and therefore human error.

"That means a technology solution can't be the only approach," Gold says. "Companies should be looking at user education programs to train, as much as possible, against these attacks and how they operate. Companies not budgeting some amount for these new threats are playing with fire."

It's a perspective shared by Sadik Al-Abdulla, a senior manager with CDW Security Practice (www.cdw.com), who strongly advocates investment in educational security initiatives.

"A substantial number of modern malware incidents that crop up inside the corporate firewall occur because of direct user action—someone clicked on something they shouldn't have," Al-Abdulla says. "Web filters and gateway security can help, but think of these as guard rails—it's better

if your users are driving down the middle of the road. A little security awareness goes a long way."

Gold says traditional spending on desktop antivirus solutions falls short in protecting against these rapidly evolving threats. He says network traffic analysis can allow IT to monitor inbound and outbound activities and take remedial action in the event of unexpected or unauthorized activity.

"This can stop an APT in its tracks if done correctly, by monitoring what information is leaving the company and blocking it," says Gold, who adds that this approach isn't always easy to do—or even foolproof—but nevertheless needs to be part of IT's arsenal against these new threats. He recommends allocating 10 to 20% of security spending to these classes of solutions.

Be Aware Of What You Already Have

Understanding the current environment can also make future security spending that much more efficient. Al-Abdulla says IT needs to keep current infrastructure in mind while drawing up shopping lists for new security products and services.

"Put security considerations on your checklist as you shop for new products," Al-Abdulla says. "Before buying, consider implications on your security posture. Will this integrate with my Active Directory? Will this function well with my SSL VPN?"

Al-Abdulla says due diligence like this is an increasingly critical step and recommends that companies ask vendors how they test their products for security and review software on the basis of what security features they may have or may be missing.

"It's not just the technology that's going to save you," Azarcon concludes. "Security today is about combining all of these parts—governance, technology, processes, roles, and responsibilities—together to build something that's more effective and more efficient."

> "Don't put all your eggs in one basket. Instead, invest in defense-in-depth via multiple mechanisms and controls, all based on the organization's understanding of where critical information and data resides. Then go from there."
>
> *- Eosensa's Julius Azarcon*

Spend Wisely On New Equipment

With The Right Strategies, It's Possible To Purchase Equipment Without Breaking Your Budget

SOMETIMES, THE NEWEST, sleekest, fastest equipment comes with a price tag that's sigh-inducing. With unlimited funds, some IT managers might think, it would be easy to create a data center that meets every need automatically. But that daydream isn't as far-fetched as many might think, even without the unlimited funds. By spending money wisely and making savvy purchases, data centers can sport new equipment that makes them more automated and efficient. Here are some tips on purchasing equipment the right way.

Key Points

- Look at existing power usage in the data center to identify equipment that might not be working as efficiently as possible.

- Consider larger business goals in terms of projected growth in revenues or employees.

- Implement standardization as much as is feasible; this will reduce the amount of interoperability issues and could give you a pricing break.

Look At Power & Cooling Usage First

Upgrades and changes to the equipment mix will likely cause changes to power usage levels, and sometimes, these differences can significantly reduce the financial benefits that were projected by an equipment purchase.

Before buying new equipment, evaluate the existing power usage data, advises Brandon Siri, senior marketing service representative at Server Technology (www.servertech.com). Measurement can be obtained at several levels, from overall facility usage down to the outlet level.

By getting a handle on how power is used throughout the center, an IT manager can determine areas where new equipment purchases would make the most sense. For example, a server that's not due to be replaced may be drawing far more power than necessary, creating inefficiencies. In that case, the data center would want to find a more efficient server to purchase in order to save money over time.

Similarly, looking at cooling trends in the data center can help to determine where new equipment will be placed and whether existing equipment is doing its job or needs to be moved. Jon-Louis Heimerl, director of strategic security at Solutionary (www.solutionary.com), suggests that a data center manager evaluate cooling strategies such as containment through sub-dividing areas and using in-rack cooling more often. Understanding power, cooling, and airflow will help to make more informed equipment buying decisions.

Think About Business Objectives

Creating a more efficient, powerful data center can be an end result in itself, but more likely, new equipment purchases should be done in order to sync up with larger business goals, notes Kris Domich, principal consultant at Dimension Data.

Before buying equipment, meet with other company executives and dig deep into their business goals and plans for the coming year and beyond. Often, these discussions are lacking in specificity in terms of hiring, revenue goals, application usage, potential downsizing, and other factors, but such information is vital for IT so that they can plan appropriately.

This will prevent over-purchasing in some cases, or could spark conversation about doing more purchasing than anticipated. To get company buy-in, create an equipment buying plan that articulates how the new equipment will affect other operations, and why the purchase is necessary. For example, if the sales team intends to increase its ranks by five staff members in the next year, an equipment buying plan would touch on how those people would be supported by new servers that are geared toward serving up sales applications and handling better customer relationship management functions.

Implement Standardization Practices

Although most data centers have a mix of vendors, it can be useful to gravitate toward utilizing just a few brands, if possible. The benefits to this approach can include more purchasing power—buying in bulk, to some degree—as well as better support functionality, fewer conflicts among equipment types, stronger infrastructure overall, and development of a single vendor relationship instead of many.

Domich notes that with standardization implemented in processes and procedures, as well, efficiency can be boosted and upgrade schedules streamlined. Future purchasing plans can be timed with product innovation from selected vendors, giving IT managers a chance to build standardized procedures around purchasing, maintenance, and contract negotiations. With just a couple vendors in the data center, those vendors will get to know the goals and specifics of the center and will be able to make suggestions about operational tweaks or other improvements.

Understand Maintenance & Upgrade Schedules

When comparing equipment types, one factor that tends to get overlooked is the maintenance required for a specific piece of equipment. Domich recommends that IT managers do their homework in terms of understanding the amount of time that will be necessary for upgrading and maintaining equipment.

In addition to asking for these types of schedules from a vendor, it's helpful to ask other data center managers about their experiences, particularly if the data center is a similar size and supports about the same number of users. Although every data center is unique in terms of setup, especially when it comes to power and cooling, these ballpark estimations will be useful in determining if a new piece of equipment will cost less than another but may be more costly in terms of staff time. P

Best Tip: Include Power Monitoring In Your Purchasing

According to Brandon Siri, senior marketing service representative at Server Technology (www.servertech.com), data center and IT managers need to start planning power monitoring early in their design cycle. "Waiting until the last minute can result in rush decisions and compromises to the infrastructure," he says. "Getting the right cabinet PDU installed ensures that you are using all the available power [and] have the correct outlet types and gives you the intelligence features that your design requires for optimization."

He cautions against skimping on monitoring during purchasing rounds, as well. Inexpensive components and basic cabinet PDUs work, he notes, but they don't give data center managers the monitoring and outlet control functions of more intelligent versions. "The cost of the cabinet PDU intelligence can be justified with a positive ROI after a few months, once you realize that they can help you save on overall power consumption," Siri says.

Gig.U Project Aims To Speed Up Broadband & Spur Innovation

In an effort to spur economic development and promote cooperation among their respective schools and communities, 29 leading research universities across the United States have banded together to form the University Community Next Generation Innovation Project, otherwise known as Gig.U. The goal is to develop ultra-high-speed networks in each of the research communities to drive economic growth, attract sought-after faculty and students, and promote a new generation of innovation to address critical needs, such as education and health care.

The project, funded by non-profits and private enterprises, will work with current and potential network service providers and other organizations to investigate coverage, prices, and other road-blocks to ultra-high-speed network deployment on campuses and their surrounding communities.

Keeping Up With Innovation

For many of the participating institutions, 10Mbps, 100Mpbs, and even 1Gbps connection speeds are common. Increasingly, however, many have grown dissatisfied with these rates of access and are pushing for 10Gbps. Only then do they feel that the United States will be able to maintain its current position as a leader in addressing the increasingly complex problems inherent in the worldwide community. Blair Levin, a fellow at the Aspen Institute's Communications and Society program and former executive director of the FCC's national broadband plan, sees far-reaching implications in it all. Through the Gig.U project, he feels the United States will move "toward leadership in the next generation of applications for economic development, small business services, health care, education, public safety, and a number of other essential services." Leading research universities will be strengthened—universities that are "our most important asset in the global information economy of the 21st century."

There will be hurdles, of course. Many communities are not convinced of the value of the project, and investment dollars might be difficult to attract. Gig.U is looking to appease those fears by convincing business leaders that a little effort will pay off in huge returns for the businesses and schools involved. This in turn will lead to other communities nationwide starting their own collaborations.

Development of workable ultra-high-speed networks will be key to the Gig.U project. With those platforms developed, Levin says, "we will improve U.S. competitiveness around the world, not just in broadband services, but also in all the sectors that rely on that platform."

News

Smartphone Sales Grow, Android Leads

According to a report from Gartner, the Android OS has taken over the smartphone market. Android took 43.4% of the smartphone market, up from its 17.2% share just one year ago. Although overall mobile sales fell 4.4% from the last quarter due to the compromised supply of components after the earthquake in Japan, sales of mobile devices increased 16.5% year over year. Smartphones are increasingly popular, now accounting for 25% of total mobile handset sales. Behind Android in the smartphone market are Symbian, LG, and Apple iOS. Shipments for smartphones in the second quarter rose above non-smartphone shipments of mobile devices for the first time, increasing 74% from the same time last year.

Users Like The Cloud For Personal Use

A recent survey conducted by Funambol, a cloud solutions company, revealed that users are likely to use personal clouds. Of the 232 respondents, 75% said they plan to use a personal cloud or digital locker. The types of potential storage in the cloud varied: 88% plan to store contacts in the cloud, 85% plan to store files, 80% said calendar information, and 69% will store photos with a cloud service. Users are optimistic about using cloud solutions for both business and personal use, with 72% saying they would use it for both. More than half would be willing to pay a fee for the hosted personal storage, saying $5 per month is the most reasonable amount.

Millennials Are Self-Sufficient Yet Demanding

Research from Bomgar shows that Millennials, those born in the '80s and '90s, are slightly altering the role of IT in the workplace. When faced with a tech problem, people of this generation are more likely to consult the Internet or search for a solution on their own. According to the report, 61% would choose another method before turning to an enterprise IT department. Not only does this show that young employees can be self-sufficient, they may help to reduce the workload on busy IT staff members. However, the report also pointed out that Millennials expect fast fixes; about 60% say IT support response time should be 10 minutes or less.

4G Adoption May Help Economy

According to a study from Deloitte, 4G technology investments could potentially reach $25 billion to $53 billion by 2016, possibly creating 371,000 to 771,000 U.S. jobs. The study further estimates that such a large investment in 4G LTE could increase gross domestic product by $73 billion to $151 billion, all depending on the United States' adoption rate of the new technology. In the report, Deloitte created two separate scenarios, a moderate approach and a rapid approach to 4G growth, resulting in the wide range of figures. The company says that more than 150 carriers in 60 countries are developing 4G networks; currently South Korea, Sweden, and China are leading the development.

Ease The Power & Cooling Budget Burden

Look For Rebates, Consolidation Opportunities & Alternative Energy Sources

POWER AND COOLING TOGETHER make up one of the biggest line items in the budget for many a data center. That's why many data center managers look there first when budget time comes around. They're always looking for ways to save, and smart investments that will bring those numbers down.

The following are some ideas for sensible investments that might justify their expenditure by making a real dent in your power and cooling budget.

Consider Virtualization

Virtualization has been a popular technology for several years now, but some IT and data center managers have neglected the idea or have been unable to pursue it. Virtualization comes with complexities, to be sure, but if you're ready to do it, the benefits of consolidating the work of many servers into fewer are clear: Supplying power to those servers is no longer necessary, and they're no longer adding heat to the room.

"When it comes to sensible investments, virtualization is definitely the front-runner," says Dean Smith, project consultant for Modis (www.modis.com). "Even a small business may have four or five servers, and as they refresh, they could make that one machine that does the same thing."

If you do consider virtualization, it makes sense to gather information about the age of each server in the data center first. That way, you can target the oldest equipment, which is likely to be less efficient and draw more power. "That's a great strategy and maximizes the benefits of virtualization," says Bob Mobach, practice director for data center infrastructure at Logicalis (www.logicalis.com).

Move To The Cloud

The same concerns about virtualization apply to the cloud, but it's still worth checking out how some functions could work in the cloud. You have to weigh whether the benefits of getting a server or two off your grid and out of your cooling matrix are worth the regulatory and other concerns that a move to the cloud might mean. With power costs and server density increasing every year, your costs may have reached the point where the trouble is worth it.

"A lot of our clients in small and medium-sized data centers have realized that colocating or going to the cloud is a good path for them," Mobach explains. "It takes a lot to run a proper data center."

Talk To Your Utility Provider

Many utility companies have been offering incentives to go green, such as working with large users of power on power switching or giving discounts on more energy-efficient lights and other equipment. If your utility company wasn't doing this a few years ago, how about now? If the programs are in place, check them out and see if a few thousand dollars now might lead to many thousands in savings over a period of years.

"We've worked on several projects where 50% of the total cost of project was rebated back by the utility to the customer," says Steve Suesens, category manager for Staples Technology Solutions (www.staplesadvantage.com). "That makes the ROI higher, so our advice is always to work with companies and contact providers to see what types of incentives and rebates are available."

Ensure Your Cooling Equipment Is Up To Snuff

Maybe you're running CRACs or other equipment that are touted in the industry as the best around. But what do you know about the components inside that equipment? What are the capabilities of the motor? Can it respond to changing conditions and run at both high and low voltage? "A lot of managers don't dig into the components that are part of the cooling system," says Shannon Bard, CEO of SNTech (www.sntech.com). "Instead of relying on the company that's installing the system, you need to press them about the components and their capabilities." For example, he says, there are variable-speed, electronically commutated motors that you can program to ramp up slowly and to run at very low speeds in certain conditions.

"As filters clog and things change in the room—more equipment [or] less—the motor reacts and increases or decreases its power," Bard explains. That kind of motor can even act as a rough monitor for conditions in the data center, because by charting its activity, you can detect changes in temperature or other conditions before they become critical.

Explore Alternative Energies

This may be more palatable if your budget for the coming year includes a new data center, although some retrofitting in this area is going on, too. It's worth considering alternative energy sources to see if the long-term savings justify a smart investment now. For example, some data centers use fuel cells and are able to realize not only savings over time, but also a pretty good return on investment. "Some owners of commercial buildings and data centers buy fuel cells because that puts them in a position to sell power they don't need back to their electricity providers," Smith says.

But even if the budget doesn't allow for those kinds of expenditures, there are plenty of lower-cost alternatives, Mobach says. "We've worked with some data centers where they put solar arrays on the roof and got some federal and state incentives to do so," he says. "There are also plenty of cogeneration products to let you use natural gas, which is the cleanest-burning fossil fuel and often cheaper than electricity." P

Key Points

- Consider alternative energies, and check with your utility to see if it will rebate some of the costs you incur.

- Consider some of the strategies you might not have tried yet: cloud computing, virtualization, hot and cold aisles, and containment.

- Don't assume your cooling is as efficient as it could be or that you have to buy a new system to make it that way. You may be able to increase its efficiency by upgrading some of its components.

Best Tip: Consider Investing In An Audit

Maybe you have hot and cold aisles set up already, know where every hot spot is, and know that every grommet is sealed tight and no cool air is escaping or hot air seeping in. But every data center has opportunities lying around to make things just a bit more ship-shape. If you can't spot them yourself or don't have time to look, maybe someone else can.

"People know about a lot of these strategies, but if you don't know exactly where your problems lie, you're kind of just guessing," says Bob Mobach, practice director for data center infrastructure at Logicalis (www.logicalis.com). "For a small or medium-sized data center, a comprehensive audit or tactical assessment doesn't have to be that expensive. You might balk at the expense, but when you consider the potential savings, it starts to look not that big."

One strategy can be to amortize the cost of the audit over several years, then set a schedule after the audit to put its suggestions in place over the same period.

FEATURE PACKAGE

Budget-Friendly Staffing

How To Satisfy IT Staffing Needs Within The Confines Of Tight Budgets

WHEN TRUDGING THROUGH the depths of a murky economy, thinking about staffing in terms of the coming year's budgeting can be a harrowing prospect. Not only do employees obviously want to keep their jobs, but they don't want to face employee cuts around them that can make their own jobs more difficult. Combine those concerns with the rising cost of IT labor, and IT managers have an uphill climb when it comes time to create a staffing budget.

"IT labor cost is the only expensive item in the data center that has steadily increased over the years," says Dan Olds, founder of Gabriel Consulting Group. "While the cost of hardware and software has dropped radically, the cost per labor hour has increased—although, to be fair, the amount of work that a single employee can accomplish has increased significantly, as well. However, the fully burdened cost of a data center staff is one of the largest cost components in the IT infrastructure."

Combine Talents

According to Shane Bernstein, managing partner of Q (www.qconnects.com), the most challenging aspect of staffing within a tight budget is finding the right talent with the right skill level in a timely manner. If this tall order isn't already a challenge, consider also that if managers can't find employees with the requisite experience or skills, they should consider the time and effort that must be dedicated to training and staff development. He adds that budgetary constraints can also influence decisions on whether to hire full-time employees or use consultants or contractors.

"Since the economic downturn, we've seen a trend of companies seeking out candidates with multiple skill sets," Bernstein says. "Spending more money on single hires that can assume the duties of two roles, hiring managers can stay under budget by getting two for a bit more than the price of one. For example, instead of hiring a business analyst and a developer, a hiring manager might look for a programmer/analyst—someone who can write code as well as speak to the business and put together functional and technical requirements for a project."

Other examples, he adds, include technical project managers and technical product managers/engineers who have technical expertise, skills, and work experience with a hands-on background in development or infrastructure. Some of these types might already be among an organization's staff, so it's important to identify them and consider them for expanded roles. Olds notes that it's important to find and keep well-rounded players who can handle a wide variety of roles, though he adds it's also crucial to bring in less-experienced hires who can grow into more responsible roles. After all, they'll cost less and work hard at their hired position and even other responsibilities if they're truly interested in building out their skill sets.

"Don't be afraid to hire college graduates, especially if you have senior folks who are willing and able to mentor," says Bob Cuneo, CIO at the Eliassen Group (www.eliassen.com). "In today's market, you can probably get a very sharp college graduate, without spending a lot, who will have a big upside."

Cuneo also recommends investigating creative ways to provide incentives to compensate for not providing reasonable salary adjustments. For example, organizations can support certification training, allow a certain degree of telecommuting, and provide forums for cross-training and knowledge sharing among teams.

Consider Alternatives

Planning for staffing cuts in an upcoming budget is never easy, and one of the biggest challenges is determining whether cuts are actually necessary. Cuneo says that organizations in an office consolidation and/or acquisition mode could be good candidates for staffing cuts because it provides opportunities to reassess their environments to determine the feasibility of staff reduction.

Further, IT managers should weigh the option of investing further in technology or improvements in methodologies and procedures, rather than adding staff. One burgeoning trend sees IT organizations outsourcing to cloud service providers, which can diminish the need for in-house specialists. However, Cuneo says this requires due diligence from a cost/benefit analysis perspective.

"[This ensures] that the savings are favorable for the business; that the service you are outsourcing does not provide you a competitive advantage; [and] that the cloud provider has the credentials, experiences, and appropriate SLA to support your business requirements and sensitivity to the legal and security implications," Cuneo says.

If staffing cuts are necessary, or if IT managers are unable to squeeze new hires into the upcoming budget, Bernstein says it might be wise to explore new managerial or developmental methodologies that can result in more efficient operations and faster iterative development cycles. He also recommends looking into paired programming, where developers work in pairs to learn from each other and check code quality, and test-driven development, which involves the development of test scripts before/during the development of code, in turn reducing the need for quality assurance engineers.

Other creative steps can also help ease staffing-related budgetary burdens. "In the near term, [managers] can spread the work around to other staffers, which is typically what happens," Olds says. "Over the longer haul, they need to closely examine what everyone is doing and figure out if all of the tasks are necessary or if they can be automated. Companies that have done this have found, for example, that they're spending time generating reports that no one reads or needs, or that small and inexpensive changes to hardware or software can lighten the labor load significantly." ▣

Key Points

- Finding the right talent with the appropriate skill level can be a difficult endeavor when budgets are tight.

- Consider combining roles, such as project manager and technical expert, to help reduce staff while keeping overall tasks and responsibilities at current or even higher levels.

- New technologies and managerial methodologies can help ease the burden of staffing cutbacks.

IT Managers Hamstrung By Support Tasks

A recent HP survey of IT managers at small and medium-sized businesses across the country found that, instead of focusing on areas that could boost a business's bottom line, IT managers are spending much of their time on hardware and software problems. The HP study suggests that this is largely due to out-of-date technology that hasn't been upgraded because of the recession or stringent cost controls implemented by upper management. The survey, conducted by Wakefield research, included 500 IT managers and IT experts.

According to the study, 93% of the companies "placed cost concerns over the best IT solutions," and almost 90% of the companies experienced IT-related problems that hurt computing efficiency and productivity. Forty-six percent of the respondents said low-performing hardware was a problem. Another 37% said out-of-date hardware was a problem, and 23% named unreliable hardware as a problem.

Among the areas cited for requiring the most improvement are computer processing speed (35% of respondents), reliability (19%), and energy efficiency (9%). About 30% said they would ask their CEOs to upgrade to newer, higher-quality equipment. Another 20% would suggest investing more in IT systems, and 13% would recommend "spending more time planning and researching the best solutions for their company's needs," the report says.

Time To Upgrade

Curtis Hutcheson, U.S. Commercial Country manager for HP's Personal Systems Group, says that these problems are not only a drain on IT managers' time, they are also hurting overall productivity. Hutchinson recently spoke with a client who waited 10 minutes to load an application on his computer, which was still running Windows XP. He says about three-quarters of businesses are still using that 10-year-old operating system.

Hutcheson says that everyone he works with in IT would like to be able to reduce their hardware and software support workloads and spend more time on projects that will add value to their businesses. HP's survey confirms this: 41% of IT managers said that their time is best spent on planning their companies' IT strategies, as opposed to 11% who think they should be focusing on hardware support.

"They're inundated with support issues," Hutcheson says of IT workers. "That's why sometimes you have to go through this hump of upgrading technology."

When discussing technology upgrades with company executives, Hutcheson says, IT managers should make it clear that they are working to cut costs. But it's also important to emphasize that they are investing in technology that will make employees more efficient and productive.

Best Tip: Become A Strategic Partner

Rather than assuming the role of a cost center, try to get your organization to view IT as a strategic partner in the corporation. This recommendation comes from Bob Cuneo, CIO at the Eliassen Group (www.eliassen.com), who adds that there is a variety of ways for IT managers to show senior executives and department heads how IT is a strategic component of the business' well-being.

"We all know how important information is to the success of any business—how to effectively capture it, mine it, analyze it, and make informed and timely decisions with it," Cuneo says. "Commensurate to information is the infrastructure and environment that allows employees to access this data quickly, painlessly, and interactively with their colleagues, business partners, and customers. It is important for the IT executive/manager to champion this viewpoint and work with their organizations to put these systems in place. IT's ability to establish this mindset within the management fabric of their company will go a long way to ensuring that IT gets its fair share of the investment piece."

Cabinet Power Distribution Innovation

Server Technology Delivers For Your Data Center

IN 1984, Server Technology started with the goal of solving the problems associated with advanced power control for IT devices. Now, it sets the standard for data center CDUs (cabinet power distribution units). Here is a look at what makes Server Technology tick.

The Power Experts

According to Julie Brown, marketing manager for Server Technology, "Server Technology's management believes in 'sticking to our knitting,' or doing what we do well exclusively—power distribution units for data centers and telecommunications operations. We believe that our deep focus allows us to create the world's best rack-based power distribution units in terms of quality, reliability,

What's New At Server Technology

Over the course of 2011, Server Technology has released 220 new products—34 of which were in August alone. The new releases include:

- Smart POPS cabinet power distribution units
- Five new CDU models
- Sentry Power Manager v5.0
- Updated firmware

performance, and value." And although Server Technology has a focused business model, it has developed more than 1,900 variations of the rack-based power distribution units, so there's no shortage of options.

Another key way the company distinguishes itself is through the creation of custom products. "By combining our fully engineered sub-assemblies into the specific configurations that our thousands and thousands of customers need, we can quickly and easily tailor our technology to fit any valid power distribution requirement," Brown says. And if neither you nor the power experts from Server Technology can find a way to meet your data center needs, an engineer will be brought in to see if he can design you a CDU.

"Server Technology prides itself in being the power experts in the industry," Brown says. "With one of the largest engineering organizations in the rack-based power distribution industry, we have literally dozens of engineers who do nothing else but create the innovative technologies we have brought to market for over 26 years." Server Technology listens to its customers' demands for new products. "Our newest products represent a wide variety of new products from each of our product families, showing that there's demand across the board for all kinds of cabinet power management and CDU functionality," Brown says.

Server Technology
Solutions for the Data Center Equipment Cabinet

Server Technology isn't only a hardware company, though. "Our associated SPM (Sentry Power Manager) measures, monitors, manages, and trends power usage, energy efficiency, temperature, and humidity, which gives our customers the information and analytical tools they need to make key decisions on how to run their operation," Brown says. The combined data gives you the ability to increase ROI and improve uptime for capacity planning or meet green initiatives.

What's New?

As of press time, Server Technology has launched 220 new hardware products in 2011—34 of them in the past month. The expansion included all of Server Technology's product families, which consist of categories for switch POPS; switch CDUs; smart, metered, and basic CDUs; fail-safe power redundancy; console port access; and remote and -48VDC power management.

"We also introduced Version 6.1 firmware for all of our intelligent power distribution units with a new user interface that integrates seamlessly with SPM," Brown says. "The

new firmware provides unique dashboard views for CDU health and capacity." SPM was also recently updated to version 5.0.

Smart POPS is a new product family of per-outlet power sensing CDUs that are ideal for data center managers who need individual device-level power measurements. The idea for Smart POPS CDUs occurred after one of the world's largest financial institutions came to Server Technology looking for power measurements for individual servers, as well as something that would ensure that the servers' outlet states would never be turned off. Server Technology modified the institution's switched CDUs, which provide outlet reboot status, to deliver constant availability with local/remote power and environmental monitoring over IP. [P]

SERVER TECHNOLOGY

(800) 835-1515
www.servertech.com

Server Technology has more than 25 years of experience in the power distribution market. The company specializes in CDUs (cabinet power distribution units) and works closely with its customers to design solutions that meet the customers' specific needs.

Combat I/O Bottlenecks
& Optimize Your Virtual Platform's Performance

DISKEEPER CORPORATION IS KNOWN for being an innovator in the performance and reliability technology sector, and with its latest release, V-locity® 3, the firm takes aim at the performance-robbing issues that afflict virtual platforms, including I/O bottlenecks, resource conflicts, and wasted disk space.

V-locity 3 is a virtual platform disk optimizer that consists of two components: a Guest Agent, which you install on all Windows virtual machines, and the V-locity 3 Host Agent. V-locity Host for Hyper-V installs on the Microsoft Hyper-V hypervisor, and for VMware ESX/ESXi, there is a V-locity 3 Host Agent that can be installed on a VM or not, so long as it can communicate with the V-locity 3 Guests. Administrators can simply deploy and forget V-locity 3; it performs its disk optimizations and I/O streamlining in the background automatically and without negatively affecting performance.

Direct benefits of V-locity 3 include faster virtual machine and host I/O throughput, increased VM density, better overall platform reliability, better resource allocation to eliminate lag-inducing contention, and improved VM resource usage within a shared storage system. In the long term, V-locity 3 can also extend hardware life spans and reduce operating costs.

Technologies Working Together

V-locity 3 includes several exclusive technologies designed to dramatically improve the efficiency and performance of your virtual environment.

One of Diskeeper's newest technologies is V-Aware™, which detects external resource usage from other virtual machines using the same virtual platform and enforces an intelligent resource-sharing scheme to eliminate contention that typically hinders performance on the Host Server.

Similar to V-Aware, Diskeeper's new CogniSAN™ technology is capable of detecting external resource usage within a shared storage system, such as a SAN, and puts a stop to multiple simultaneous resource requests. Like everything else in V-locity 3, these SAN optimizations are automatic and transparent and don't interfere with SAN-layer operations.

V-locity 3 includes IntelliWrite® technology, which is an advanced file system driver originally introduced in Diskeeper 2010 that writes files to disk in a non-fragmented state, effectively stopping fragmentation before it occurs. This results in improved file write performance, less demand on the defragmenting function of the system, and improved compatibility and interoperability with other storage management offerings.

InvisiTasking® is one of Diskeeper Corp's most versatile technologies, appearing in all of Diskeeper Corporation's publicly available offerings. In V-locity 3, this technology effectively replaces the traditional round-robin job scheduler that runs one job at a time, regardless of whether the job is particularly CPU-, memory-, or storage-intensive, leaving those other tasks to wait in line. The InvisiTasking micro job scheduler, on the other hand, recognizes that operations that utilize different resources can be run simultaneously, and it schedules them accordingly to accomplish more in less time.

Automatic Streamlining

With Automatic Space Reclamation, V-locity 3 is capable of simplifying virtual disk compaction by zeroing out unused data blocks on virtual disks. This function also enables VMotion (VMware) or Live Migration (Hyper-V) to compact a disk on the fly when migrating virtual disks. As the name implies, Automatic Space Reclamation requires no active involvement to work.

The V-locity 3 Special Virtual Disk Auto Detection feature normalizes the optimization settings across each V-locity Guest to the same settings as the VM, which can dramatically improve performance. This automatic feature is just another hands-off technology that can fine-tune your virtual environment to better handle special virtual disk types, such as Linked Clones, and Differencing Disks. This feature also lightens the load for the defragmentation engine.

Instant Defrag™, available in both Diskeeper 2011 and V-locity 3, kicks in on those occasions when defragmentation does occur. The IntelliWrite component flags the new fragmentation, and the Instant Defrag engine steps in to relocate the file even as it's being written to minimize unnecessary I/O passed from the OS to the disk subsystem. This aligns the data on the drives for fast access and ensures that the SAN optimization routines continue to operate uninterrupted.

Another unique feature you'll find in V-locity 3 is Real-Time Free Space Consolidation, which optimizes large blocks of free space to improve write-to-disk speeds.

V-locity® 3

(800) 829-6468
www.v-locity.com

Email Security Appliances

Product

Axway MailGate 5.0

Description

Axway MailGate 5.0 combines email network protection, policy-based content filtering, automated encryption, and more in a single integrated solution. Now including Secure Messaging functionality on a hardened Linux appliance, the latest release of Axway MailGate includes enterprise-class features such as gateway-to-gateway encryption, regulatory compliance lexicons, enhanced digital rights management, and archiving capabilities.

- Inbound threat protection: antivirus and antispam reduce network congestion
- Outbound and inbound message security and DLP (data loss prevention), including encrypted S/MIME email inspection and digital signature validation
- Support for enterprise-grade email security infrastructures and multitenancy, meaning different policies can be applied to different business units and departments with a single installation
- Disaster recovery and high availability via NAS
- Incorporates Axway Secure Messenger, a powerful, policy-based email encryption platform
- IPv6 support extended to secure messaging

Best For: Large and medium-sized enterprises.

Price: $8,900

EdgeWave Email Security

Email Security appliances from EdgeWave are managed appliances that protect against internal and external messaging threats. The company's zero-touch solutions include hosted services and appliances that are fully managed by EdgeWave messaging security experts. EdgeWave appliances have optional Vx Technology, which provides automatic failover to the hosted services in case of overwhelming attacks or when needed for load balancing. Vx Technology ensures uninterrupted email security, should unforeseen events occur that affect email servers or power resources. This performance resiliency offers true hybrid messaging security, integrating a local network appliance with a hosted service.

- Protection against spam, viruses, botnets, spyware, phishing schemes, identity theft, and inappropriate content
- Popular among ISPs and MSPs
- Models range from 1,000- to 40,000-user systems
- Scales to meet any company's needs

Best For: Small or home offices on up to large enterprises, depending on the model.

Fortinet FortiMail Appliances

Fortinet says that its FortiMail family of appliances delivers proven, powerful messaging security for any size of organization. Purpose-built for the most demanding messaging systems, FortiMail appliances utilize Fortinet's years of experience in protecting networks against spam, malware, and other message-borne threats, the company says. The FortiMail family prevents your messaging system from becoming a threat delivery system—its inbound filtering engine blocks spam and malware before it can clog your network and affect users. Its outbound inspection technology prevents outbound spam or malware (including 3G/4G mobile traffic) from causing other antispam gateways to blacklist your users.

- Filters up to 1.3 million messages per hour
- Three modes of operation: Transparent, Gateway, and Server
- No per-user licensing
- Identity-based encryption of mail
- Wide range of performance, integrated storage, and form factor options
- FortiGuard subscription services deliver dynamic updates to antispam and antivirus functionality

Best For: Organizations that need to protect against spam, viruses, and bots; ensure secure delivery of confidential content; and meet regulatory and legal compliance requirements.

Contact: (866) 868-3678 | www.fortinet.com

Product

SonicWALL SuperMassive E10800

Description

The SuperMassive E10800 from SonicWALL is built to inspect hundreds of thousands of connections simultaneously across all ports. Among its standard and optional features are intuitive AppFlow Visualization tools, which let the E10800 apply app-level policies to productive or unproductive application traffic. It also features active and passive hardware failover protection with state sync. Additionally, SonicWALL's Reassembly-Free Deep Packet Inspection provides application intelligence, SSL traffic inspection, anti-malware, and more.

- 40Gbps of deep packet inspection throughput
- 96 processing cores
- Six 10Gbps SFP+ and 16 1Gbps SFP Ethernet ports

Best For: Large enterprises, government agencies, higher education facilities, and service providers.

Price: $198,000

Vircom modusGate m150

Antispam and antivirus are the foci of Vircom's modusGate m150 spam filter appliance for the SME market. The modusGate m150 is optimized for complete integration with Microsoft Outlook and Exchange Server 2003/2007/2010, making it easy for users to not only tag false negatives, but also to find and release erroneously flagged false positives. Additionally, an available policy management add-on gives the m150 data theft and loss prevention capabilities.

- Intel dual-core processing power
- Can handle 5 million messages per day for 2,000 users and unlimited domains
- Dual antivirus add-on available
- Sequential Content Analyzer predictive technology to thwart zero-day attacks
- Inbound and outbound message authentication

Best For: Small and medium-sized enterprises and ISPs, hosting providers, and MSPs

Price: $3,599 including 50-user software licensing and one-year maintenance plan

Vircom modusGate mBlade

Vircom's modusGate mBlade email gateway appliance shares a number of features with the modusGate m150, including Outlook integration and Exchange Server optimization. It also supports add-ons for DLP, double antivirus coverage, and more. However, its high capacity makes it more suitable than the m150 for use by large companies and service providers.

- Two Intel Xeon dual-core processors
- Can handle 17 million messages per day for 15,000 users and unlimited domains
- Redundant power supply
- Expandable to eight SATA drives with RAID 0/1/5/10
- 2U form factor
- Four 1Gbps Ethernet ports

Best For: Corporations, large enterprises, ISPs, hosting and mail service providers, and large universities.

Price: $22,950 including 50-user software licensing and one-year maintenance plan

PRODUCT SPOTLIGHT

Processor's Product Spotlight highlights options available in key data center product categories, providing product information side-by-side for easy comparison.

Proofpoint Enterprise Messaging Security Gateway P650

Proofpoint's Enterprise Messaging Security Gateway appliances can be provisioned with comprehensive inbound/outbound email security as well as DLP. Some notable features include advanced connection management, zero-hour threat protection, enhanced message tracing, and TLS encryption support. The company's DLP works with both structured and unstructured data and includes an integrated policy-based email encryption module. Additionally, the P650 supports Web DLP through policy integration with ICAP-enabled proxies. Proofpoint's SaaS-enabled appliances can also be deployed in unique hybrid configurations that combine on-premises hardware with certain SaaS features.

- Defense-in-depth DLP for compliance with HIPAA, GLBA, and PCI DSS
- "Set it and forget it" administration
- Robust incident management features
- 99.8% or better effectiveness against all types of spam, phishing attacks, malware, and other forms of malicious email

Best For: Medium-sized and large enterprises.

Price: $8,500 plus annual user license fees for installed features

Sendmail Sentrion

There are three hard appliances in Sendmail's Sentrion family, which use the powerful Sentrion Message Processing Engine for bidirectional message inspection that provides enterprises with DLP, anti-malware, and compliance services. The devices also support ICAP proxies, Splunk reporting, and protocols including HTTP Webmail. Sendmail also offers similar functionality in virtual appliances, hybrid implementations, and even blade servers.

- Supports additional applications for incident remediation, reputation servicing, policy-based encryption, and more
- Scalable; supports clustering
- Can manage automatically generated email, including invoices, CRM, and ERP messages
- Supports enforcement of complex policies

Best For: Large enterprises.

SonicWALL NSA E8510

The flagship of the SonicWALL NSA lineup, the NSA E8510 combines sophisticated software with a high-performance, 16-core hardware design to provide multigigabit scanning performance. The appliance features the company's Reassembly-Free Deep Packet Inspection technology, which uses a scalable application inspection engine to analyze content of any size in real time, providing protection against outside and inside threats at the application and network layers. The NSA E8510 can even decrypt and scan both inbound and outbound HTTPS traffic on the fly without impacting performance, SonicWALL says.

- 10 Gigabit Ethernet support
- 2.2Gbps of full deep packet inspection throughput
- Clean VPN feature safeguards the integrity of IPsec and SSL VPN connections

Best For: Enterprise deployments in data centers, campus networks, and distributed environments.

Price: $39,995

WatchGuard XCS 370

WatchGuard's XCS 370 appliances are affordable, complete email security solutions that defend against inbound threats such as viruses, spam, blended threats, phishing, spyware, and network attacks. The XCS 370 blocks about 98% of unwanted traffic at the perimeter, the company says, and it can boost your email security and performance without blowing your budget.

- SecureMail Email Encryption available by subscription
- Outbound content and attachment scanning
- 1U shallow rackmount form factor
- Powered by dual-core Intel Celeron processors
- Twin Gigabit Ethernet ports

Best For: Small to midsized enterprises.

Price: $5,199 with one-year LiveSecurity bundle

WatchGuard XCS 770R

WatchGuard's XCS 770R is an easy-to-use solution that supplies enterprise-level email security, privacy, and compliance features. It offers DLP and protection against network attacks, phishing attempts, and blended threats. Available subscription services include a number of Web filters, Web application control, and a fast scanning feature for large file downloads. Message-level encryption support is another subscription offering, but support for TLS encryption comes standard. The company says that its WatchGuard ReputationAuthority technology blocks 98% of unwanted messages at the perimeter before they can waste network resources.

- Hardware redundancy via RAID 1 storage with hot-swapping support
- Four 1Gbps Ethernet ports
- Intel Xeon quad-core processor
- 1U form factor

Best For: Medium-sized to large enterprises.

Price: $14,400 with one-year LiveSecurity Plus bundle

Processor's Product Spotlight highlights options available in key data center product categories, providing product information side-by-side for easy comparison.

VPN & Remote Connectivity

Product

4ipnet WHG311 Secure WLAN Controller & EAP110 Access Points

Description

The combination of 4ipnet's WHG311 Secure WLAN Controller and EAP110 Access Points offers an attractive solution for small venues. WHG311's local, site-to-site, and remote client VPN tunnels can be used to secure the flow of business information for workers on the road or home-based teleworkers, without the need for workers to preinstall any VPN client software. 4ipnet's EAP110 Access Points can be distributed through multiple network locations as if they are under the same internal network via secure tunneling technology.

- Eight 10/100/1000 Base-T RJ-45 LAN ports
- Recommended max of 150 concurrent users
- Up to 10 site-to-site VPN links
- Cloud-based tunneled-AP management of up to 30 4ipnet 802.11n access points
- Encrypted Gigabit throughput
- Creative deployment flexibility for both local and remote networks

Best For: Small-scale deployments such as branch offices and airport terminals.

4ipnet WHG315 Secure WLAN Controller & EAP300 Access Points

4ipnet's WHG315 Secure WLAN Controller integrates secure access control; visitor account provisioning; centralized WLAN management; and local, remote client, and site-to-site VPN into one box to provide simplified manageability and instant mobility. VPN tunneling between the WHG315 and 4ipnet's EAP300 access points allows WLAN management to be deployed remotely through the cloud, saving deployment costs and maintenance fees for companies looking for a way to keep costs down on corporate IT infrastructure.

- Eight 10/100/1000 Base-T RJ-45 LAN Ports
- Recommended max of 250 concurrent users
- Up to 10 site-to-site VPN links
- Management of up to 50 4ipnet 802.11n access points via VPN Tunnel
- High-performance secure wired and wireless network with Gigabit throughput
- Central user access control and policy and security management

Best For: Medium-scale WLAN deployments in SMEs and campuses.

4ipnet WHG515 Secure WLAN Controller & EAP300 Access Points

4ipnet's WHG515 WLAN Controller, coupled with the company's tunnel-based EAP300 Access Points, offers a central management solution for managing hundreds of remote WLANs for enterprises with a large number of remote offices scattered throughout the nation. One 4ipnet WHG515 can manage up to 250 access points, meaning enterprises, healthcare facilities, and government departments can benefit from sharing their central offices' resources in a more efficient and secure way, regardless of where, when, and what.

- Four 10/100/1000 LAN Ports
- Recommended max of 800 concurrent users
- Management of up to 250 access points anywhere within a Layer 2/Layer 3 network
- Up to 30 site-to-site VPN links
- High-speed wireless transmission and Gigabit encrypted throughput
- Central user, policy, security, QoS, and service management

Best For: Large enterprises, governmental units, healthcare facilities, and campuses.

Product

WatchGuard SSL 100

Description

Ideal for small and medium-sized businesses, the WatchGuard SSL 100 supports up to 100 simultaneous authenticated users, each with multiple connections. Unlike other SSL VPN offerings that require additional add-ons or expensive service contracts, the WatchGuard SSL 100 provides a complete and comprehensive array of features that are designed to provide maximum ease of use, flexibility, and security at an attractive price.

- Support for up to 100 concurrent users
- Ships with 25-user pack (upgradeable up to 100)
- 1U rackmount kit included
- Four network interfaces
- LCD with navigation buttons

Best For: SMBs that need an affordable and secure SSL VPN solution with numerous authentication methods.

Price: Starts at $1,950

WatchGuard SSL 560

The WatchGuard SSL 560 delivers dependable universal network access, strong administrative control, flexibility, and extensible authentication. This powerful solution provides robust security from the end user to the network for managed and unmanaged devices at a superior price point. The WatchGuard SSL 560 provides strong protection out of the box for businesses that must have integrated security, ease of use, and the capacity to scale to meet growing needs.

- Support for up to 500 concurrent users
- Ships with 250-user pack (upgradeable to 500)
- 1U rackmount kit included
- Four network interfaces and two USB ports
- LCD with navigation buttons

Best For: Large organizations in need of a highly secure remote access solution that provides reliable connectivity to corporate networks, applications, and data.

Price: Starts at $9,150

BUYING GUIDE

BUYING TIPS:

Data Center Racks & Cabinets

RACKS AND CABINETS are integral components of nearly every data center, but their importance often goes overlooked. Make the wrong choice in the type you stick your equipment on or in, and you could be asking for trouble in terms of damage caused by heat, dust, and moisture; exorbitant cooling costs; unwieldy cables; excessive noise; and security breaches. When purchasing racks and cabinets, keep the following considerations in mind.

Know thy equipment. You may know what equipment you'll use your racks and cabinets for, but you also need to know the impact that equipment will have. For example, knowing how tall and wide the racks/cabinets must be to accommodate said equipment is imperative. Height-wise, Gina Dickson, Black Box Network Services product manager, says, "42U is standard, but 45U is becoming more popular, and a smaller height like 38U might be necessary for legacy rooms where cable is going to be overhead." Width-wise, the current cabinet standard is 24 inches wide, though 30-inch wide cabinets are gaining popularity. Depth-wise, "if you are mounting equipment with different depths, you may even need to consider multiple sets of rails or split rails to accommodate the different depths," Dickson says. Overall, Rackmount Solutions account manager Susan Wynne suggests buying cabinets that can accommodate equipment "with the largest dimensions" possible.

Work the room. Related to space considerations is an analysis of the room the racks/cabinets will go in, Wynne says. "Can the cabinet be easily transported to the destination?," she says. "Will it roll through standard-height doors? Are doors and side panels removable for easy installation? Is the product solid and durable? Is there room to grow for additional product purchases?," Dickson adds that it's important to take into account raised floors and ceiling height, which will impact how tall racks/cabinets can be. "Bigger is always better when choosing a cabinet, allowing for more equipment, cables, etc.," she says. "But if you have a limited footprint, the 48-inch deep, 30-inch wide cabinet may not be an option."

Stay cool. One of the most important considerations is heat. Gauging how much heat equipment will generate will help determine what cooling methods will be adequate for the racks/cabinets you purchase. For example, Dickson says, using a traditional hot aisle/cold aisle approach will impact the cabinet doors required because you'll need mesh doors. "You need to ensure that the cool air is directed to the front of the cabinet and that the hot air can disperse from the rear," Dickson says.

Key Terms

M6 holes. Square holes common with rackmount equipment and server cabinets; they can be adjusted to a round hole with a cage nut.

Rackmount units (RMU). Cabinets and racks are measured in rackmount units, with each RMU, or U, equivalent to 1.75 inches.

Elsewhere, the temptation to use open racks vs. cabinets to combat heat can result in merely filling the entire room with heat. "This may work fine for low levels of heat, but once enough equipment is present, it will become impossible to keep the equipment at an acceptable temperature," Dickson says. One cooling approach gaining popularity is a modified hot aisle-cold aisle with containment, she says. "All the cold air is forced into the cold aisle, which is contained with doors to keep the cool air in. The warm air is then pushed back into the room or up into the plenum using chimneys on the top of the cabinets." This approach does require a cabinet offering containment doors and chimneys as accessories.

Other factors. Your rack and cabinet purchases will also need to take into consideration items such as determining whether equipment needs to adhere to ETSI standards, checking if rails are pre-drilled and adjustable, knowing rail weight limits and included mounting hardware, safeguarding against earthquakes, examining overnight and weekend building air conditioning practices, and factoring in noise. ▣

Buyers' Checklist

☑ Is cable management built in, or does the rack or cabinet leave adequate space to neatly route cables? Does the rack/cabinet provide PDU mounting options?

☑ Many cabinets now come standard with PDU mounting brackets.

☑ Does the equipment you're mounting require tapped or M6 holes?

☑ Will you need to disassemble the rack/cabinet to get it in the room?

☑ Is the cabinet lockable to prevent potential security issues?

PRODUCT SPOTLIGHT

Specialty Server Racks & Cabinets

| Product | | |

Black Box ClimateCab NEMA 12 Cabinets

Black Box ClimateCab NEMA 12 Wallmount Cabinets

Data Center Depot CableMax

Description

Black Box's ClimateCab enclosures offer climate-controlled protection that lets you install servers without the need for additional cooling or costly infrastructure. These full-sized cabinets come configured for servers or datacom equipment and feature a welded 12-gauge steel frame with integral struts.

- Rated for protection against falling dirt; circulating dust, lint, and debris; and dripping or splashing liquids in indoor environments
- Full-sized cabinet with 42U of racking space
- Available with 12-24 or M6 rails
- Choose from models with 6,000 BTU or 8,500 BTU air-conditioning units
- 40-inch depth accommodates most servers

Best For: Housing servers in remote locations without cooling infrastructure.

Price: $4,499.95 to $5,499.95

Contact: (888) 433-5049 | www.blackbox.com

ClimateCab NEMA 12 Wallmount Cabinets from Black Box are the answer when you need to install a small amount of rackmount equipment in less-than-ideal conditions. These secure cabinets provide a compact way to protect and cool sensitive components.

- NEMA 12 rated for protection against falling dirt; circulating dust, lint, and debris; and dripping or splashing liquids in indoor environments
- Compact wallmount design saves space
- Single- or double-hinged
- Choose from a cabinet with a fan or an 800 BTU air-conditioning unit

Best For: Equipment protection in hot, dirty environments such as factory floors.

Price: $999.95 to $2,795.95

Contact: (888) 433-5049 | www.blackbox.com

CableMax from Data Center Depot is the premier cabinet for cable and heat management. This cabinet was designed to combat the problems caused by the trend of components getting smaller while capacity is increasing. CableMax employs an abundance of cable pass-through holes in the frame for cross cabling and mesh enclosures to promote airflow throughout the cabinet.

- Can use split rear doors to save aisle space
- Split rail system available so you can have two different rail depths
- Improved Ganging system
- Features 63% or 80% mesh in doors and top panels
- Additional adjustable vertical and horizontal cable management available
- Dirak locks and handles on doors and side panels

Best For: Data centers in need of a cabinet with a large number of cable pass-throughs.

Contact: (877) 429-7225 | www.datacenterdepot.com

| Product | | |

Information Support Concepts Economy WC Series 42U Server Rack Cabinet

iStar Group Claytek WSM-960 9U 600mm Depth Rackmount Server Cabinet

Rack Solutions 55U Open Frame Rack

Description

The Economy WC Series 42U Server Rack Cabinet from Information Support Concepts is available in both a traditional 42U, 19-inch model with 36.5-inch usable depth and a Co-Lo version that includes four 10U secure client compartments. The WC Series cabinets are available with free dock-to-dock shipping anywhere in the continental United States.

- Both units measure 80.91 x 23.62 x 39.37 inches (HxWxD)
- 71% ventilated high-density door
- Heavy-duty casters and leveling feet
- Removable side panels
- Perforated roof and front and rear locking doors

Best For: Enterprises with deep, hot-running servers that need affordable racking.

Price: $799.95 for traditional 42U version; $1,750 for Co-Lo version

Contact: (800) 458-6255 | www.iscdfw.com

With a supported chassis depth of up to 23 inches, the rugged, shockmount-style WSM-960 server cabinet from iStar Group's Claytek division features a patented anti-vibration design with an industrial spring located under the cabinet post cage.

- Gilled side panel air vents
- Portable handle included
- Optional front and rear covers and optional casters
- Universal approach fits most rackmount chassis and equipment

Best For: High-risk and rugged IPC environments.

Contact: (888) 989-1189 | www.istarusa.com

The 55U Open Frame Rack from Rack Solutions provides up to 30% more space than a typical 42U model, while consuming less square footage. The rack optimizes cooling, makes wiring easy, and has streamlined support for power strips and PDUs. It is compatible with Dell, HP, IBM, Cisco, and almost everything else. Optional accessories include extra vertical cable organizers, side panels, tops, a caster kit, power strips, and a baying kit.

- 3,000-pound capacity
- 24-inch width makes it perfect for data centers
- Flush floor mount spreads load on floor tiles
- Universal square holes with cage nuts included
- Other sizes available: 24U, 30U, 36U, 44U, 50U

Best For: Data centers that could benefit from additional vertical rack storage space.

Price: Starts at $499.99 for 55U

Contact: (888) 903-7225 | www.racksolutions.com/rack

Processor's Product Spotlight highlights options available in key data center product categories, providing product information side-by-side for easy comparison.

Data Center Depot
Seismic Equipment Cabinet

The Seismic Equipment Cabinets from Data Center Depot are designed to protect valuable equipment in the event of an earthquake. A basic 40U cabinet is available, along with two 44U cabinets with special features designed to protect and manage a large volume of cables, patch cords, or fiber cables. This cabinet has an integrated top panel with cable pass-through and options such as a bend limiter with access hinge and a cable tie-down bar to enhance cable management.

- NEBS Zone 4 tested
- Top panel with cable cutout for cable pass-through
- Available with open- or solid-sided frames
- Cable management available
- Available in various sizes

Best For: Data centers that need to protect equipment from possible earthquakes.

Contact: (877) 429-7225 | www.datacenterdepot.com

Hergo ApxServer
Noise Reduction Enclosure

Hergo's ApxServer Noise Reduction Enclosures allow for mounting of all computers and electronic equipment that meets the EIA 19-inch specifications. The enclosures are 24 x 36 inches and come in either 12U or 26U heights. They feature Class A noise reduction foam and are Class A fire-rated.

- Can hold up to 800 pounds (12U model) or 1,000 pounds (26U model) with industrial casters
- 12U version perfect for under desks
- Black, quality powder-coat finish; environmentally friendly
- Front and back doors include locks

Best For: Enterprises that could benefit from reduced noise levels.

Price: Starts at $1,195

Contact: (888) 222-7270 | www.hergo.com

Hergo Jupiter Co-Location
Rack Cabinet

Hergo's heavy-duty full-sized Jupiter Co-Location Rack Cabinet features 20U x 2 top and bottom locking compartments.

- Two basic standard frame sizes—42U x 36" or 42"D
- Removable, lockable side panels
- Front door—vertically louvered with glass
- Rear door—solid with knock-outs for up to three fans (optional)
- Handle or combination lock available.
- Two locking/two non-locking casters supplied
- Quality powder coat finish—environmentally friendly
- Options include: fixed/slide-out shelving, power and cable management, cooling solutions

Best For: Customers requiring complete security and protection of valuable network equipment at host or private locations.

Price: Starts at $1,695 (36"D) or $1,825 (42"D)

Contact: (888) 222-7270 | www.hergo.com

Rack Solutions
Wall Mount
Rack

Rack Solutions' Open Frame Wall Mount Rack offers nine different configurations, making it ideal for almost any application. The Wall Mount Rack lets you mount up to 21U of equipment in the front rack space and allows for up to 9U of space on the top and bottom of the rack. The open design promotes optimal airflow and provides easy cable access and tie points.

- Up to 400-pound capacity
- Available in 12U, 15U, and 21U heights
- Available in 4U, 6U, and 9U depths
- Optional side panels, top panels, and front covers
- Assembles in less than 10 minutes

Best For: Network switches, patch panels, and servers.

Price: Starts at $199.99

Contact: (888) 903-7225
www.racksolutions.com/wall-mount-rack.htm

Rackmount Solutions
Air Conditioned
Server Cabinet
& Soundproof
Server Rack

Rackmount Solutions' Air Conditioned Server Cabinets have built-in A/C units with 4K, 7K, 10K, or 20K BTUs to protect equipment in warm or dirty environments. Units are available from 14 to 48U, with depths from 24 to 42 inches. Soundproof Server Racks from Rackmount Solutions reduce external sound up to 28.5dB while dispersing internal heat loads up to 7kW. Built-in casters make it easy to move these servers to another area when the need arises. The Soundproof Server Racks are available in active and passive versions and in 24U and 42U sizes.

- Air Conditioned Server Cabinet protects expensive equipment from overheating, works like a refrigerator with a condensate pan, and can be paired with a rack-mount or side-mount A/C for more space
- Soundproof Server Racks decrease noise up to 28.7dB(A), which is the equivalent of taking freeway noise levels down to library-quiet. Also disperses up to 7kW of heat. Employees can concentrate better, leading to increased productivity and less physical strain from excessive noise

Best For: Data centers and standalone applications with heat problems.

Price: Starts at $5,633 (Air Conditioned Server Rack) and $5,249 (Soundproof Server Rack)

Contact: (866) 207-6631 | www.rackmountsolutions.net

Rackmount
Solutions Network
Cable Bundle
Server Rack

Need to secure a rack with a serious number of cables? Rackmount Solutions' Network Cable Bundle Server Rack solves all problems. With a roomy interior up to 28 inches, you can set your rails to 19 or 23 inches and slide left, right, or center to allow for your cabling needs. Rails slide front to back and side to side for maximum flexibility. The unit is available as an open rack or with doors, side panels, and tops for security/aesthetics.

- Compatible with all leading servers, including blade servers
- Allows up to 10 inches of cabling space between side panel and rail
- Use as an open rack or add security with locking side panels and doors

Best For: Data centers and standalone applications needing to integrate quantities of cable drops.

Price: Starts at $1,115

Contact: (866) 207-6631 | www.rackmountsolutions.net

CLOUD TIPS & TRICKS

Managing Cloud Performance
Make Sure You're Seeing The Results You Want After Moving To The Cloud

BY NOW, YOUR BUSINESS has very likely either adopted cloud computing technology in some form or is making plans to do so. But now that you have all that virtual power at your fingertips, how can you make sure you get the most out of it? Here are some tips that will help you take full advantage of what's in the cloud—as well as avoid potential pitfalls.

Keep Track Of How It's Doing

It is the responsibility of the cloud service provider to supply users with comprehensive information that outlines overall utilization of the four basic resource types—CPU, memory (RAM), storage, and network—to justify the chosen cloud sizing characteristics. You can get this information through integrated and outside monitoring tools and use it to both measure current utilization and project future growth.

Not all cloud service providers offer systems-level monitoring and performance management, however.
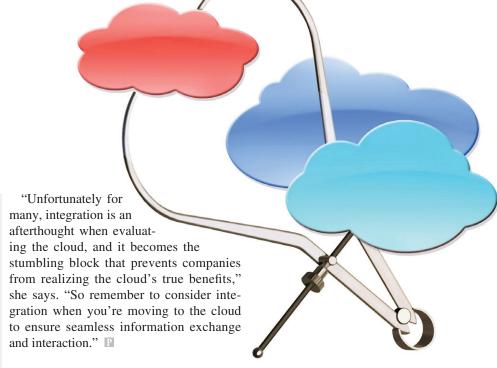
"It's important to consider not just the overall performance of hardware resources but also the application-level performance characteristics of a given system," says Eric Brooks, solutions architect at Logicalis (www.logicalis.com). "This will allow for correct server sizing relative to application requirements. Often, application vendors do not take into account the variables introduced when virtualizing systems and tend to overestimate the physical requirements to support their applications."

Integrate Your Cloud Applications

Many companies have moved their applications and processes to the cloud, but once there, they wonder how to get access to their hosted data and make it interact. This is where integration comes in. There are a number of scenarios where cooperation among programs is crucial—for example, integration can help your accounting software talk to your inventory database.

Your service provider should be able to help you with integration solutions, according to Margaret Dawson, vice president of product management at Hubspan (www.hubspan.com), a cloud-based business integration provider.

"Unfortunately for many, integration is an afterthought when evaluating the cloud, and it becomes the stumbling block that prevents companies from realizing the cloud's true benefits," she says. "So remember to consider integration when you're moving to the cloud to ensure seamless information exchange and interaction." **P**

Best Tip: Keep An Eye On Your Bill

The cloud boasts a pay-as-you-go billing structure as one of its biggest selling points, but don't let that lure you into a false sense of security. Just as when you leave machines plugged in at the office, your cloud applications could be running and costing you money even while nobody's using them.

Keep track of what's running when and whether it's really necessary, says Scott Simko, community manager for cloud hosting provider Virtacore Systems (www.virtacore.com). "When you're not using your virtual memory, turn it down to the lowest resource pool to save money," he says.

Also, be aware of minimum charges. Many agreements in the cloud come with per-usage prices but also set thresholds for minimum usage. Make sure you understand the minimum requirements for cloud usage and that your company is hitting those minimums, or any savings could vanish quickly, according to Chris Stephenson, partner and co-founder of Arryve, a strategy consulting firm.

"Understand per-user charges," Stephenson says. "Many services are starting to charge per user. This means that any user who logs into the service one time [triggers] a charge for that period. When you're calculating a per-user charge, make sure your count of users includes every user rather than just the frequent users."

FEATURED COMPANY

Asset Management Aficionados

Track Assets & Get The Best Return Of Value For Retired IT Equipment With DMD Systems Recovery

THERE COMES A TIME every few years when the equipment operating within a small or midsized enterprise facility comes to the end of its life cycle and must be replaced. Doing so isn't just a matter of plugging in new equipment and hauling the retired equipment to the curbside to be taken to the local dump, however. Besides being environmentally irresponsible (and likely illegal), disposing of aged equipment in such a manner isn't smart where getting the maximum return on investment is concerned. That's where DMD Systems Recovery comes in.

Since establishing itself in Phoenix, Ariz., in 1994, DMD Systems Recovery (www.dmdsystems.com) has conducted business following the "Reduce, Reuse, and Recycle" philosophy. The products and services the company provides SMEs reflect as much. "DMD principals are pioneers in the IT asset management business," says Morris Scott, president of DMD Systems Recovery. "Our board of advisors includes professionals with Ph.Ds, masters, and engineering degrees. We have had projects all over the world for federal, state, and commercial enterprises."

Beyond assisting companies in safely and smartly removing their aged equipment to meet compliance regulations, the environment as possible while simultaneously tracking it via an in-depth asset reporting program and maximizing its return of value.

"When you throw away a laptop, you throw away the 22,000 pounds of resources that it took to make it," Scott says. "Likewise, when you crush a desktop [PC], you destroy most of the resources and energy that it took to make it. DMD has just completed a rewrite of software that has been under development since 1994. The software allows us to track not only the asset but the energy that is saved by reuse or recycling of the asset. With this information, we are able to offer our customers Certified Intelligent Energy Reports that customers can plug into their ISO 14001 or EHS (Environmental Health & Safety) programs."

The company provides two methods of asset recovery. For companies seeking one-time pickup of retired equipment, DMD abilities. Additionally, the company provides logistics services that include de-installation and packaging options. The company can also relocate equipment, prepare areas for new installations, and properly and safely package equipment for transport to new facilities.

Additionally, DMD Systems Recovery is a member of the NAID (National Association for Informa-tion Destruction) and provides Department of Defense-compliant data destruction services via its internal data-destruction operations or onsite via its mobile lab, which a senior auditor oversees at the customer's facility. Either option provides customers full indemnity, certificates of destruction for all media, and media tracking abilities.

"The data destruction software and processes that we use are designed to protect our customers' data, assets, and the environment," Scott says.

Recover, Reuse & Recycle

For DMD Systems Recovery, the highest form of recycling is reusing equipment. Here, the company relies on four recycling processes: reuse, remanufacturing, redeployment, and recovery. Reuse entails marketing complete computer systems to schools, resellers, startups, and companies. Remanufacturing involves removing and

Recovery's facilities. Beyond removing customers' environmental and legal obligations, the asset reporting process enables customers to reference a chain of command for their equipment.

To gather asset information, DMD Systems Recovery conducts audits of equipment to determine its value; wipe data; enter equipment into an inventory system; assign an ID tracking number; test the equipment; and prepare equipment for remarketing, donation, repurchasing, or redeployment. Once auditing is completed, customers receive documentation for their own analysis, as well as a Certificate of Destruction and Transfer of Ownership.

Working with scientists and EPA calculations, Scott says, DMD is able to provide its customers with Certified Carbon Savings Reports from the reuse and recycling of computers and laptops, giving them data for their ISO 14001 programs. He adds that DMD developed its set of tools for quantifying the resources saved by reusing and recycling laptops and desktops using an EPA-developed method.

"Many customers realize that this is a huge savings that had not been previously considered," Scott says. "Customers that have sustainability programs find that our sophisticated energy analysis reporting allows them to use this data to illustrate energy savings to their shareholders and upper management." P

> ## "There are many potential liabilities with regulations and negative publicity that can be a factor when disposing of IT equipment. It is becoming more critical to work with a company that has the experience, resources, and relationships that can provide these services in a safe and cost-effective manner."
>
> *- DMD Systems Recovery's Morris Scott*

company also provides services to assist businesses in the de-installation, packaging, transport, refurbishing, and reselling of older equipment. Further, DMD Systems Recovery's data-wiping services ensure that a company's equipment won't contain any traces of valuable data that can fall into the wrong hands and come back and haunt the company.

"DMD offers world-class, ISO 14001- and R2-compliant IT asset management services and end-of-life support," Scott says. "Our target is companies with 500 or more employees, and our mission is to save resources and protect our customers by the intelligent processing of technology."

Asset Recovery

That intelligent processing comes in large part thanks to DMD System Recovery's full lifecycle management system that emphasizes providing customers with green solutions. The system also ensures that customers' disposed equipment makes as little impact on the Systems Recovery offers the outright purchase of computers, servers, and other equipment complete with documentation of the equipment's current value and any costs associated with transportation, all in an effort to return maximum value to customers. In addition to EPA documentation relating to the equipment (thus completely indemnifying the company of environmental liabilities), customers receive reports containing asset-related data.

DMD Systems Recovery's second asset recovery method is a fixed-price purchase plan that's aimed at SMEs that prefer to establish scheduled pickups. With this option, companies receive a quarterly assets pricing sheet to help maximize their assets' value. Each pickup of retired equipment references asset pricing, information regarding recycling services, and any necessary administrative and transportation costs.

DMD Systems Recovery works with multiple national carriers to haul away equipment—anything from one pallet to an entire trailer load—with complete tracking testing components, repairing and replacing components, and rebuilding systems to meet factory specifications in order to remarket older technology. Redeployment involves buying equipment with failed or missing components, retesting them, and redeploying them. Recovery is viewed as a last resort and involves sending individual components to EPA-certified companies for recycling.

"There are many potential liabilities with regulations and negative publicity that can be a factor when disposing of IT equipment," Scott says. "It is becoming more critical to work with a company that has the experience, resources, and relationships that can provide these services in a safe and cost-effective manner."

DMD Systems Recovery's recycling services use customized software and asset reporting, which includes assigning asset numbers and serial numbers, noting configurations and equipment status, and documenting other data relating to equipment as it enters DMD Systems

PROCESSOR.

Network With Your Peers
At These IT Training & Association Meetings
Across The United States

SEPTEMBER

Data Center World
Sept. 11 to 14
Orlando World Center Marriott
Orlando, Fla.
www.datacenterworld.com

Cloud Computing User Group
Sept. 12
Platform Labs
1275 Kinnear Road
Columbus, Ohio
www.platformlab.org

AFCOM Central Texas
Sept. 15, 11:30 a.m. to 1:30 p.m.
Marie Callender's Restaurant
9503 Research Blvd.
Austin, Texas
www.afcom.com/afcomnew
/CentralTexas.HTML

Data Connectors Washington, D.C., Tech-Security Conference
Sept. 15
Washington, D.C.
www.dataconnectors.com/events
/2011/09WashingtonDC/agenda.asp

InfoSec 2011: Security (R)evolution
ISSA Middle Tennessee-
InfoSec Nashville
Sept. 15, 8:30 a.m. to 5 p.m.
Nashville Convention Center
601 Commerce St.
Nashville, Tenn.
www.technologycouncil.com
/connect/infosec-2011

ISSA Northern Virginia
Sept. 15, 5:30 p.m.
issa-nova.org

ISSA South Florida
Sept. 15
Miami, Fla.
www.sfissa.org

SIM Minnesota
Sept. 15, 2:30 p.m.
Northland Inn
7025 Northland Drive N.
Minneapolis, Minn.
www.simnet.org

BICSI Fall Conference
Sept. 18-22
MGM Grand Hotel & Convention
Center
Las Vegas, Nev.
www.bicsi.org/fall/2011

AITP Oklahoma City
Sept. 20
aitpokc.org

AITP Southwest Missouri
Sept. 20
aitpspringfield.org

AFCOM Central Texas
Sept. 22, 11:30 a.m. to 1:30 p.m.
Marie Callender's Restaurant
9503 Research Blvd.
Austin, Texas
www.afcom.com/afcomnew
/CentralTexas.HTML

AITP St. Louis
Sept. 22, 5:30 p.m.
Crowne Plaza Clayton
7750 Carondelet Ave.
St. Louis, Mo.
stlouisaitp.org

AITP Northeast Ohio
Sept. 22, 6 p.m.
Blue Gold Room
3300 Lake Road
Ashtabula, Ohio

ISACA Kentuckiana Chapter
Sept. 23, 11:30 a.m. to 1 p.m.
Mountjoy Chilton Medley
462 S. 4th St. 26th Floor
Louisville, Ky.
www.isacaky.org

AITP Atlanta Chapter
Sept. 25, 5:30 to 8 p.m.
Crowne Plaza Ravinia
4355 Ashford Dunwoody Road
Atlanta, Ga.
www.aitpatlanta.org

AITP Akron
Sept. 27
356 Fighter Group Restaurant
4919 Mt. Pleasant Road
North Canton, Ohio
www.akron-aitp.org/index.htm

Data Connectors New York Tech-Security Conference
Sept. 29
Bridgewaters
11 Fulton St.
New York, N.Y.
www.dataconnectors.com/events
/2011/09NewYork/inv_ex.asp

ISSA Metro Atlanta
Sept. 29, 6:30 to 9 p.m.
Dell SecureWorks
One Concourse Parkway NE
5th Floor
Atlanta, Ga.
www.gaissa.org

OCTOBER

Interop
Oct. 3 to 7
Javits Convention Center
New York, N.Y.
www.interop.com

ISACA South Carolina Midlands: ACL—Getting Started & Moving Forward
Oct. 5, 8:30 a.m. to 4 p.m.
BlueCross BlueShield Of SC
Tower Auditorium
2501 Faraway Drive
Columbia, S.C.
www.scisaca.org

Data Connectors Montreal Tech-Security Conference
Oct. 6
Hyatt Regency Montreal
1255 Jeanne-Mance
Montreal, QB
www.dataconnectors.com/events
/2011/10Montreal/agenda.asp

VMware SLED
Oct. 6
Platform Labs
1275 Kinnear Road
Columbus, Ohio
www.platformlab.org

Central Plains ISSA
Oct. 7, 1 p.m.
Wichita Marriott Restaurant
9100 E. Corporate Hills Drive
Wichita, Kan.
issa-cp.org

AITP Research Triangle Park
Oct. 13
University Club
4200 Hillsboro St.
Raleigh, N.C.
www.rtp-aitp.org

Data Connectors Columbus Tech-Security Conference
Oct. 13
Quest Conference Centers
8405 Pulsar Place
Columbus, Ohio
www.dataconnectors.com/events
/2011/10Columbus/inv_ex.asp

19th Annual Statewide Internal Audit Conference: Performing an IT Audit & Security Baseline
Oct. 17-19, 7:30 a.m. to 4:30 p.m. daily
Embassy Suites-
Columbia Greystone
200 Stoneridge Drive
Columbia, S.C.
www.scisaca.org

VMware Vsphere ICM 4.1 Training
Oct. 17
New Horizons
1050 Chinoe Road, Suite 208
Lexington, Ky.
www.nhlexington.com

AITP Oklahoma City
Oct. 18
aitpokc.org

AITP Southwest Missouri
Oct. 18
aitpspringfield.org

PMI Group
Oct. 19
Platform Labs
1275 Kinnear Road
Columbus, Ohio
www.platformlab.org

AITP Atlanta Chapter
Oct. 20, 5:30 to 8 p.m.
Crowne Plaza Ravinia
4355 Ashford Dunwoody Road
Atlanta, Ga.
www.aitpatlanta.org

Data Connectors Atlanta Tech-Security Conference
Oct. 20
Atlanta, Ga.
www.dataconnectors.com/events
/2011/10Atlanta/agenda.asp

ISSA Northern Virginia
Oct. 20, 5:30 p.m.
issa-nova.org

ISSA South Florida
Oct. 20
Miami, Fla.
www.sfissa.org

PASS-Florida Melbourne
Oct. 20, 6:30 p.m.
4750 U.S. Highway 1
Grant, Fla.
spacecoast.sqlpass.org

SIM Minnesota
Oct. 20, 2:30 p.m.
Northland Inn
7025 Northland Drive N.
Minneapolis, Minn.
www.simnet.org

ISACA Kentuckiana Chapter
Oct. 21
Louisville, Ky.
www.isacaky.org

PROCESSOR.

ISSA Middle Tennessee
Oct. 21, 11:30 a.m. to 1 p.m.
HCA
Nashville, Tenn.
www.issa-midtn.org

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AITP Akron
Oct. 25
356 Fighter Group Restaurant
4919 Mt. Pleasant Road
North Canton, Ohio
www.akron-aitp.org/index.htm

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AITP St. Louis
Oct. 25, 5:30 p.m.
Crowne Plaza Clayton
7750 Carondelet Ave.
St. Louis, Mo.
stlouisaitp.org

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**Data Connectors Memphis
Tech-Security Conference**
Oct. 27
Memphis Marriott
2625 Thousand Oaks Blvd.
Memphis, Tenn.
www.dataconnectors.com/events
/2011/10Memphis/agenda.asp

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Information Security Summit
Oct. 27-28
LaCentre Conference & Banquet
Facility
25777 Detroit Road
Westlake, Ohio
www.informationsecuritysummit.org
/index.php

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ISSA Metro Atlanta
Oct. 27
Atlanta, Ga.
www.gaissa.org

NOVEMBER

**Data Connectors Milwaukee
Tech-Security Conference**
Nov. 3
Hilton Garden Inn
Milwaukee Park Place
11600 W. Park Place
Milwaukee, Wis.
www.dataconnectors.com
/events/2011/11Milwaukee/inv_x.asp

**Central Plains
ISSA**
Nov. 4, 1 p.m.
Wichita Marriott Restaurant
9100 E. Corporate Hills Drive
Wichita, Kan.
issa-cp.org

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**Metro Atlanta
ISSA Annual Conference**
"Security By Design"
Nov. 8-9
The Loudermilk Center
40 Courtland St. NE
Atlanta, Ga.
www.gaissa.org

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**AITP
Research Triangle Park**
Nov. 10
University Club
4200 Hillsboro St.
Raleigh, N.C.
www.rtp-aitp.org

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**Data Connectors Orlando
Tech-Security Conference**
Nov. 10
Orlando, Fla.
www.dataconnectors.com/events
/2011/11Orlando/agenda.asp

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AITP Oklahoma City
Nov. 15
aitpokc.org

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**AITP
Southwest Missouri**
Nov. 15
aitpspringfield.org

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AITP Atlanta Chapter
Nov. 17, 5:30 to 8 p.m.
Crowne Plaza Ravinia
4355 Ashford Dunwoody Road
Atlanta, Ga.
www.aitpatlanta.org

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AITP St. Louis
Nov. 17, 5:30 p.m.
Crowne Plaza Clayton
7750 Carondelet Ave.
St. Louis, Mo.
stlouisaitp.org

**Data Connectors
San Francisco Tech-Security
Conference**
Nov. 17
San Francisco, Calif.
www.dataconnectors.com/events
/2011/11SanFrancisco/agenda.asp

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**ISSA
Northern Virginia**
Nov. 17, 5:30 p.m.
issa-nova.org

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ISSA South Florida
Nov. 17
Miami, Fla.
www.sfissa.org

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SIM Minnesota
Nov. 17, 2:30 p.m.
Northland Inn
7025 Northland Drive N.
Minneapolis, Minn.
www.simnet.org

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**ISACA
Kentuckiana Chapter**
Nov. 18
Louisville, Ky.
www.isacaky.org

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**ISSA
Middle Tennessee**
Nov. 18, 11:30 a.m. to 1 p.m.
HCA
Nashville, Tenn.
www.issa-midtn.org

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AITP Akron
Nov. 29
356 Fighter Group Restaurant
4919 Mt. Pleasant Road
North Canton, Ohio
www.akron-aitp.org/index.htm

DECEMBER

**Data Connectors
Albuquerque Tech-Security
Conference**
Dec. 1
Albuquerque, N.M.
www.dataconnectors.com/events
/2011/12Albuquerque/agenda.asp

Central Plains ISSA
Dec. 2, 1 p.m.
Wichita Marriott Restaurant
9100 E. Corporate Hills Drive
Wichita, Kan.
issa-cp.org

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AITP Research Triangle Park
Dec. 8
University Club
4200 Hillsboro St.
Raleigh, N.C.
www.rtp-aitp.org

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**Data Connectors Phoenix
Tech-Security Conference**
Dec. 8
The Buttes
2000 Westcourt Way
Tempe, Ariz.
www.dataconnectors.com/events
/2011/12Phoenix/inv_ex.asp

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AFCOM Central Texas
Dec. 15, 11:30 a.m. to 1:30 p.m.
Marie Callender's Restaurant
9503 Research Blvd.
Austin, Texas
www.afcom.com/afcomnew
/CentralTexas.HTML

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**Data Connectors Ft. Lauderdale
Tech-Security Conference**
Dec. 15
Ft. Lauderdale, Fla.
www.dataconnectors.com/events
/2011/12FtLauderdale/agenda.asp

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ISSA Northern Virginia
Dec. 15, 5:30 p.m.
issa-nova.org

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ISSA South Florida
Dec. 15
Miami, Fla.
www.sfissa.org

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AITP Oklahoma City
Dec. 20
aitpokc.org

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AITP Southwest Missouri
Dec. 20
aitpspringfield.org

*Do you have an event you'd like to see listed?
Send an email to feedback@processor.com.*

USED & REFURBISHED EQUIPMENT SPOTLIGHT

Remember Return Policies

What To Know Before You Buy

PURCHASING REFURBISHED data center equipment doesn't always work out the way you planned. Whether it's an item that's dead out of the box or a component that arrived damaged, you want to know that any problems will be handled quickly.

"There is a big challenge in the refurbished computer business," says James Davie, co-founding partner at Canvas Systems (www.canvassystems.com), "and that is, are people going to back up the equipment they're selling?"

Knowing how a supplier handles equipment returns is an important factor in any purchase decision. Below are some guidelines to keep in mind as you shop for refurbished equipment.

Know your reseller. Warranties are only as good as the company offering them, so do your homework. "A lot of people in the refurbished market are working out of their garages, and whether they'll be there next week or not is up in the air," says Rahul Pinto, senior director of professional services at Recurrent Technologies (www.recurrent.com). Reputable companies provide faster turnaround on advance replacement exchanges, they may waive restocking fees, and they offer better support options.

Refund or credit? Even if a supplier accepts your returned equipment, you might not get your money back. "A lot of companies offer returns, but when they do, it isn't actually a return for cash value, it's a return for credit," Pinto says. Just like retailers that only offer in-store credit, some resellers don't give refunds. It's important to understand your options, especially if your equipment purchases are infrequent—your money could be tied up until you find something else you need to buy.

Ask about restocking fees. Equipment that's returned for reasons other than damage or defects may incur a restocking fee averaging about 15 to 20%. "Some [vendors] stipulate on a sales quote or invoice that there are restocking fees," Pinto says. But don't assume you're stuck paying them: "Most companies, just to ensure business continuity with customers, will waive those fees." If you're a regular customer, see if your sales rep can remove the charge.

Understand what isn't covered. Warranty and exchange policies often don't cover issues such as damage caused by the end user or a force majeure. "In those cases, customers need to have some type of disaster recovery service in place," Davie says. Part of that service could include getting items on quick ship from your reseller, because, he says, "You're essentially looking for a temporary or long-term replacement." Knowing what isn't covered under warranty will help you determine what kind of disaster recovery help you might need and what it will cost.
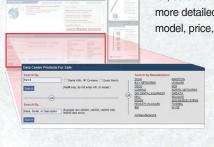
Don't recycle that packaging just yet. Before you assume it's safe to toss the original packing material, find out if you'll need to hold onto it until your warranty period expires. Some suppliers won't accept returns unless they're in the original packaging, while others are less picky. "With [most of] the quality refurbished integrators out there, you just need to get the product back in the condition it was sent in," Davie says. Customers should ask about the requirements when making their purchase so that a return isn't refused because someone inadvertently pitched the original box. P

Find Used & Refurbished Equipment
For Sale

Once you've made the decision to purchase used or refurbished equipment, finding the equipment you need is easy with Processor's online Data Center Products For Sale Database.
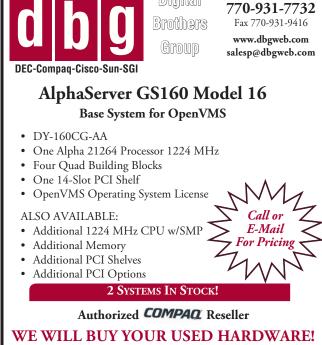
From Processor's home page (www.processor.com), you can search for a specific part number, make, model, or description. Enter the information in the appropriate box and click Search. You'll see a list of available equipment. If you don't see the particular piece you're looking for, scroll to the bottom of the search results page to conduct a more detailed search. There, you can search by part number, model, price, location, and more.
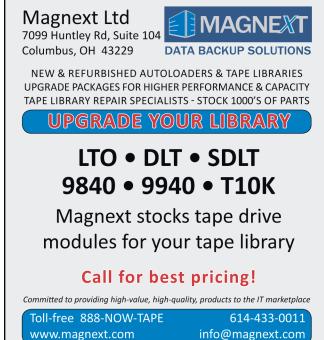
Don't know the specific part number or model? Use the drill-down search on the Processor home page to view results from specific manufacturers. Simply click the manufacturer name, and you'll see a list of all equipment listings from that manufacturer.

GREEN TECH & TIPS

A Greener Government:
Putting The National Strategy For Electronics Stewardship To Use

THE GSA (GENERAL SERVICES ADMINISTRATION) is working with the U.S. Environmental Protection Agency and the Council on Environmental Quality to implement the recommendations of the Obama administration's National Strategy for Electronics Stewardship. The new policy will promote responsible design and proper recycling with electronics within the federal government.

As such, the federal government has pledged to remove any servers, desktops, and notebooks, among other electronics, that don't meet today's energy-efficient standards from government contracts. The GSA also indicated that it will require environmentally sound disposal of electronic devices, and it will track all the excess or surplus products to ensure that they are recycled or destroyed in a way that won't negatively affect the environment. The GSA also joined the EPEAT standard development process to help ensure the expansion of green electronics certification programs for products that are purchased by the government.

The announcement, which took place at a certified electronics recycling center in Austin, Texas, also included commitments from Dell, Sprint, and Sony Electronics to promote environmentally sound management of used electronics. Both Dell and Sprint will promote U.S.-based electronics recycling markets, while Sony will work to improve the safe management of used devices. Part of the commitment includes collaboration with the EPA to encourage both consumers and businesses to use certified recyclers, because a certified electronics recycler is regularly audited to ensure the products are recycled in a way that's safe for both human health and the environment.

According to a statement from Martha Johnson, administrator for the U.S. GSA, "The federal government is the nation's largest single consumer of electronics, purchasing about $85 billion of information technology annually, of which nearly $14 billion is for equipment. By some estimates, the federal government disposes of 10,000 computers every week." Thus, participation by the GSA is particularly important for the environment. In 2010, the GSA processed $2 billion worth of used electronics, and by ensuring that the devices are recycled through a certified vendor, it's expected that the government will improve the U.S. recycling industry.

Green Goals

The National Strategy for Electronics Stewardship has four overarching goals: to encourage development of more efficient and sustainable electronics products, direct federal agencies to buy and dispose of electronics responsibly, support recycling options for American consumers, and strengthen America's role in international electronics stewardship. There's also a comprehensive list of action items and projects within each goal. For example, the EPA and GSA are actively working to support multi-stakeholder groups of electronic product designers, refurbishers, recyclers, and other technical experts to accelerate the development of green electronics.

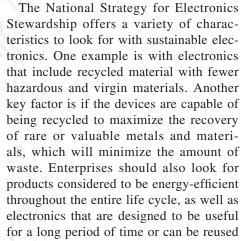The GSA is also working to propose revisions to the relevant sections of the Federal Management Regulation and other documents related to acquisition guidance. A key action item is the development of take-back agreements through interagency collaboration, such as the EPA and DoD, that will require recipients of sold, donated, or transferred products from the federal government to be sent to certified recyclers at end of life. By Feb. 29, 2012, the GSA is expected to develop education materials for the recipients of donated electronics about the recycling obligations and tips for how to fulfill them.

The National Strategy for Electronics Stewardship offers a variety of characteristics to look for with sustainable electronics. One example is with electronics that include recycled material with fewer hazardous and virgin materials. Another key factor is if the devices are capable of being recycled to maximize the recovery of rare or valuable metals and materials, which will minimize the amount of waste. Enterprises should also look for products considered to be energy-efficient throughout the entire life cycle, as well as electronics that are designed to be useful for a long period of time or can be reused by multiple people. ▣

Processor Solutions Directory

Here are brief snapshots of several companies offering products designed for the data center and IT industry.

Listings are sorted by category, making it easy for you to find and compare companies offering the products and services you need.

You can find more detailed information on these companies and the products they offer inside this issue.

To list your company and products, call (800) 247-4880.

PHYSICAL INFRASTRUCTURE

SIMPLEX ISOLATION SYSTEMS

Since 1979, Simplex Isolation Systems has been setting new design standards in modular expandable cleanroom components, isolation curtains, hardware, and new product development. Fontana, Calif.,-based Simplex's unique strip doors and mounting systems are designed for quick installation. Simplex parts and materials perform with optimum efficiency, last longer, and save you money. And with Simplex, you are always backed by industry expertise, product knowledge, and the best warranties in the market.

Products Sold:

- Cleanrooms
- Enclosures
- Strip doors
- Curtains

(877) 746-7540 I www.simplexisolationsystems.com

PHYSICAL INFRASTRUCTURE

SENSAPHONE REMOTE MONITORING SOLUTIONS

Sensaphone has been designing and manufacturing remote monitoring systems for more than 25 years and has more than 300,000 of its products in use. Sensaphone's product lineup offers a full range of devices with a broad number of features and applications designed to monitor your entire infrastructure and alert you to changes. All product engineering functions, including hardware and software design and circuit board layout and assembly, are performed at the Sensaphone facility in Aston, Penn.

Products Sold:

Remote monitoring solutions that provide email and voice alarm notification for problems related to temperature, humidity, water detection, power failure, and more.

(877) 373-2700 I www.sensaphone.com

PHYSICAL INFRASTRUCTURE

Server Technology
Solutions for the Data Center Equipment Cabinet

Server Technology is committed to the PDU market with the largest group of engineers dedicated to power distribution and other solutions within the equipment cabinet. Advancements in device power monitoring help data centers monitor and improve their efficiency, and continuous research and development is fueled by companies that look to Server Technology for their custom cabinet power solutions.

Products Sold:

A complete line of cabinet PDUs, including Per Outlet Power Sensing (POPS), Rack Mount Fail-Safe Transfer Switch, Console Port access with remote power management, Switched, Smart, Metered, Basic, and -48 VDC

(800) 835-1515 I www.servertech.com

PHYSICAL INFRASTRUCTURE

PDUs direct

Established in 2008, PDUsDirect.com is an online wholesaler providing a select line of PDUs for server and networked environments. PDUs Direct's basic, metered, and switched Rack PDUs provide local and remote power management, power monitoring, and environmental monitoring. We pride ourselves in offering industrial-grade quality products at the lowest prices, with the fastest shipping (most orders shipped within 24 hours) and simplest purchase process.

Products Sold:

A complete line of metered and basic PDUs, and 20A switched PDUs.

(888) 751-7387 I pdusdirect.com

PHYSICAL INFRASTRUCTURE

AVTECH

AVTECH Software, founded in 1988, is focused on making the monitoring and management of systems, servers, networks, and data center environments easier. AVTECH provides powerful, easy-to-use software and hardware that saves organizations time and money while improving operational efficiency and preparedness. AVTECH products use advanced alerting technologies to communicate critical status information and can perform automatic corrective actions.

Products Sold:

A full range of products that monitor the IT and facilities environment, including temperature, humidity, power, flood, room entry, and UPS

(888) 220-6700 I www.AVTECH.com

PHYSICAL INFRASTRUCTURE

MOVINCOOL
THE #1 SPOT COOLING SOLUTION

The MovinCool division of DENSO Sales California has pioneered the use of portable air conditioning solutions for a variety of North and South American markets since 1982. MovinCool works with a national network of distributors and suppliers to provide product sales, installation, and rental.

Products Sold:

- Office Pro Portable Air Conditioner Series for indoor environments such as server and telecom rooms
- Classic & Classic Plus Portable Air Conditioner Series for moisture removal, outdoor and industrial spot-cooling
- CM Series ceiling-mounted A/C for cooling server rooms, telecom closets, or anywhere space is limited

(800) 264-9573 I www.movincool.com

PHYSICAL INFRASTRUCTURE

RF Code

RF Code's real-time asset tracking and wire-free environmental and power monitoring solutions are a critical piece of a DCIM implementation. With easy "peel and stick deployment" that requires no hard wiring or cabling, RF Code solutions provide a more efficient, cost-effective approach to managing IT assets and optimizing technology environments.

Products Sold:

- Active RFID asset tags and environmental sensors
- Fixed and mobile readers
- Software that manages data captured by environmental and power monitoring sensor and asset tags

(877) 463-0756 I www.rfcode.com

PHYSICAL INFRASTRUCTURE

upsite technologies

Upsite Technologies was founded in 2001 to address data center needs for products and solutions reaching far beyond standard engineering and consulting offerings. The company innovates elegantly engineered products specifically designed to maximize data center airflow efficiency, improve PUE, and increase heat density. Upsite designs and manufactures the LOK family of products, which provides superior sealing, maximum energy savings, and the best protection available for your IT equipment.

Products Sold:

- KoldLok Grommets
- HotLok Blanking Panels
- HotLok Temperature Strips

(505) 982-7800 I www.upsite.com

PHYSICAL INFRASTRUCTURE

STACO ENERGY PRODUCTS CO.

Staco Energy was founded in 1937 and is one of the longest-lasting innovators of power products and services in the world. Our recent innovations have created the foundation for entry into the SMB data center marketplace through pioneered design and expertise. We are committed to providing you with the best tailored power solutions for your needs.

Products Sold:

A full line of UPS products, including our new FirstLine P 80 – 125kVA UPS, FirstLine PL 10 – 100kVA UPS, FirstLine BMS, and related accessories and services.

(866) 261-1191 I www.stacoenergy.com